HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL

HMD-A240

HMD-A240

US/Canada Model

Chassis No: SCC-L38A-A

17VC CHASSIS

ORIGINAL MANUAL ISSUE DATE: 1/8/2002

ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.

REVISION DATE	REVISION TYPE	SUBJECT
1/8/2002	No revisions or updates are applicable at this time.	

TRINITRON® COLOR MONITOR

SONY®

9-978-884-01

Self Diagnosis Supported model

SERVICE MANUAL

HMD-A240

HMD-A240

US/Canada Model

Chassis No: SCC-L38A-A

WEIXIUZHIJIA 维修之家

17VC CHASSIS

SPECIFICATIONS

Picture tube	0.24 mm aperture grill pitch (center) 17 inches measured diagonally 90-degree deflection
Video image area	(16.1" maximum viewing image) Approx. 328 X 242 mm (w/h) (13 x $9^{5/8}$ inches)
Resolution	Horizontal: Max. 1280 dots Vertical: Max. 1024 lines
Standard image area	Approx. 312 x 234 mm (w/h) ($12^{3/8}$ x $9^{1/4}$ inches)
Input signal	
Video	Analog RGB (75 ohms typical) 0.7 Vp-p, ±5%, Positive
Sync	Separate HD/VD, TTL Polarity Free External Composite, TTL Polarity Free (2k ohms impedance) Sync on Green
Power Consumption	100 W
Deflection frequency	Horizontal: 30 to 75 kHz Vertical: 48 to 120 Hz
AC input voltage/current	100 to 120 V, 50/60 Hz, 1.7A
Dimensions	422 x 426 x 426 mm (w/h/d) ($16^{1/2}$ x $16^{5/8}$ x $16^{5/8}$ inches)
Mass	Approx. 19 kg (41 lb 14 oz.)

Design and specifications are subject to change without notice.

TRINITRON® COLOR MONITOR

SONY®

9-978-884-01

TABLE OF CONTENTS

SECTION TITLE **PAGE**

Power Management 4
Self Diagnosis Function 4
Timing Specification 4
Warnings and Cautions 5
Safety Check Out 6

1. Disassembly
1-1. Cabinet Removal 7
1-2. Service Position 7
1-3. A & D Board Removal 8
1-4. Picture Tube Removal 9
Anode Cap Removal 9

2. Safety Related Adjustments
2-1. HV Regulator Check 10
2-2. HV Protector Circuit Check 10
2-3. Beam Protector Check (Software Logic) 10
2-4. B+ Voltage Check 10

3. Adjustments
3-1. Landing Rough Adjustment 11
3-2. Landing Fine Adjustment 11
3-3. Convergence Rough Adjustment 11
3-4. Convergence and V. Key (H. TRP) Fine Adjustment 11
3-5. Vertical and Horizontal Position and Size Specification 12
3-6. Focus Adjustment 13
3-7. Digital Convergence Adjustment 13
3-8. Convergence Specification 13

4. Diagrams
4-1. Circuit Boards Location 14
4-2. Printed Wiring Board and Schematic Diagram Information 14
4-3. Block Diagram and Schematics
Block Diagrams 15
A Board - Schematic Diagram 17
D Board - Schematic Diagram 19
H1 Board - Schematic Diagram 23
J Board - Schematic Diagram 24
4-4. Semiconductors 25

5. Exploded Views
5-1. Picture Tube 26
5-2. Chassis 27
5-2. Packing Materials 28

6. Electrical Parts List 29

POWER MANAGEMENT

The power saving mode complies with the VESA Display Power Management Signaling standard. Each state of power management shall be activated by the host computer terminating the appropriate sync signals. Blanking the video must precede termination of the sync signals. The elapsed time counter shall also be controlled by the host computer. Reactivation of the monitor shall be accomplished from the host computer by re-establishing the normal sync signal.

	Power consumption mode	Screen (video)	Horizontal sync signal	Vertical sync signal	Power consumption	Recovery time	Indicator
1	Normal operation	active	yes	yes	≤ 100 W	--	Green
2	Active-off (3rd mode)	blank	no*	no*	≤ 3 W	Approx. 10 sec.	Amber
3	Power-off	--	--	--	0 W (approx)	--	Off

* In this mode, the signal will appear in one of three ways: The Horizontal Sync Signal alone off, the Vertical Sync Signal alone off, or both signals off.

SELF DIAGNOSIS FUNCTION

When a failure occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

	Status	Area of Failure	LED Indication
1	Failure 1	HV or +B	Amber (0.5 second) / Off (0.5 second)
2	Failure 2	H Stop, V Stop or S Correction FET Failure	Amber (1.5 second) / Off (0.5 second)
3	Failure 3	ABL	Amber (0.5 second) / Off (1.5 second)
4	Aging/Self Test		Amber (0.5 second) / Off (0.5 second)/ Green (0.5 second) / Off (0.5 second)

TIMING SPECIFICATION

								PRIME MODE	
MODE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
RESOLUTION	640 X 480	640 X 480	720 X 400	800 X 600	800 X 600	832 X 624	1024 X 768	1024 X 768	1280 X 1024
CLOCK	25.175	36	28.322	49.5	56.25	57.283	78.75	94.5	108
HORIZONTAL									
H. FREQ	31.469	43.269	31.469	46.875	53.674	49.725	60.023	68.677	63.981
H. TOTAL	31.778	23.111	31.777	21.333	18.631	20.111	16.660	14.561	15.630
H. BLK	6.356	5.333	6.355	5.172	4.409	5.586	3.657	3.725	3.778
H. FP	0.636	1.556	0.636	0.323	0.569	0.559	0.203	0.508	0.444
H. SYNC	3.813	1.556	3.813	1.616	1.138	1.117	1.219	1.016	1.037
H. BP	1.907	2.222	1.907	3.232	2.702	3.910	2.235	2.201	2.296
H. ACTIV	25.422	17.778	25.422	16.162	14.222	14.524	13.003	10.836	11.852
VERTICAL									
V. FREQ	59.940	85.008	70.087	75.000	85.061	74.550	75.029	84.997	60.020
V. TOTAL	16.683	11.764	14.268	13.333	11.756	13.414	13.328	11.765	16.661
V. BLK	1.430	0.670	1.557	0.533	0.578	0.865	0.533	0.582	0.656
V. FP	0.318	0.023	0.381	0.021	0.019	0.020	0.017	0.015	0.016
V. SYNC	0.064	0.069	0.064	0.064	0.056	0.060	0.050	0.044	0.047
V. BP	1.049	0.578	1.112	0.448	0.503	0.784	0.466	0.524	0.594
V. ACTIV	15.253	11.093	12.711	12.800	11.179	12.549	12.795	11.183	16.005
SYNC									
INT (G)	NO	NO	NO	NO	NO	NO	NO	NO	NO
EXT (H/V) / POLARITY	YES	YES	YES	YES	YES	YES	YES	YES	YES
EXT (CS) / POLARITY	NO	NO	NO	NO	NO	NO	NO	NO	NO
SERRATION	NO	NO	NO	NO	NO	NO	NO	NO	NO
SYNC LEVEL	TTL	TTL	TTL	TTL	TTL	TTL	TTL	TTL	TTL
VIDEO									
VIDEO LEVEL	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
SET UP	0	0	0	0	0	0	0	0	0

WARNINGS AND CAUTIONS

CAUTION

Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

WARNING!!

An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis. The chassis of this receiver is directly connected to the AC power line.

⚠ SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and ⚠ mark on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with sony parts whose part numbers appear as shown in this manual or in supplements published by sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

ATTENTION!!

Apres avoir deconnecte le cap de l'anode, court-circuiter l'anode du tube cathodique et celui de l'anode du cap au chassis metallique de l'appareil, ou la couche de carbone peinte sur le tube cathodique ou au blindage du tube cathodique.

Afin d'eviter tout risque d'electrocution provenant d'un châssis sous tension, un transformateur d'isolement doit etre utilisé lors de tout dépannage. Le châssis de ce récepteur est directement raccordé à l'alimentation du secteur.

⚠ ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifies par une trame et par une marque ⚠ sur les schemas de principe, les vues explosees et les listes de pieces sont d'une importance critique pour la securite du fonctionnement. Ne les remplacer que par des composants sony dont le numero de piece est indique dans le present manuel ou dans des supplements publies par sony. Les reglages de circuit dont l'importance est critique pour la securite du fonctionnement sont identifies dans le present manuel. Suivre ces procedures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are "pinched" or touching high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

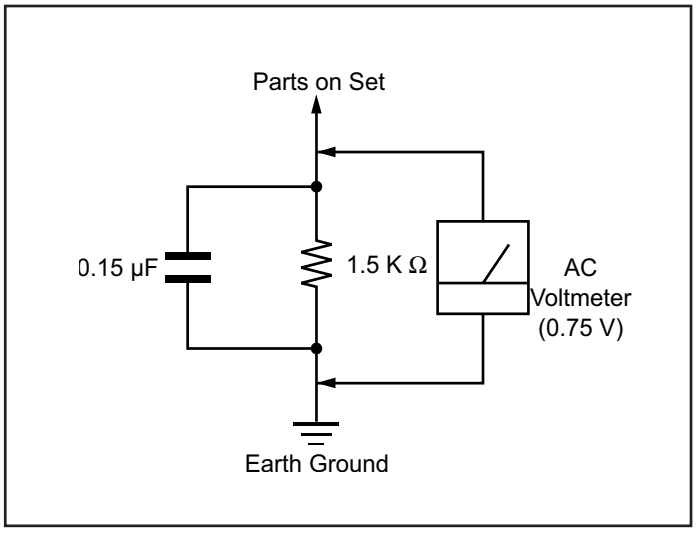


Figure A. Using an AC voltmeter to check AC leakage.

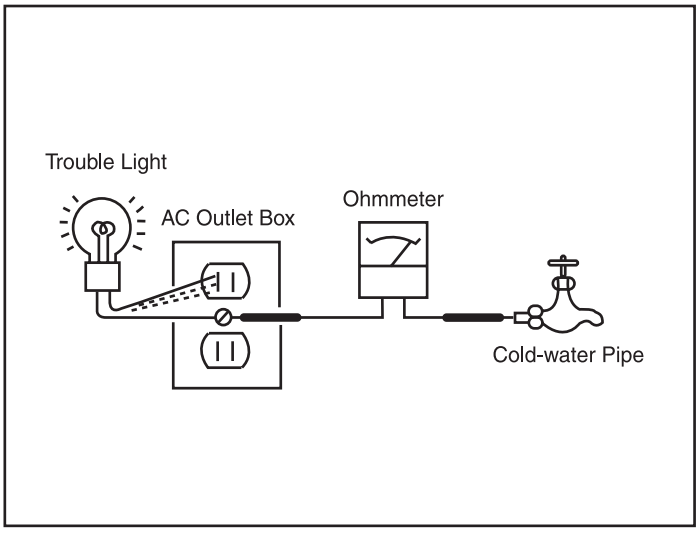
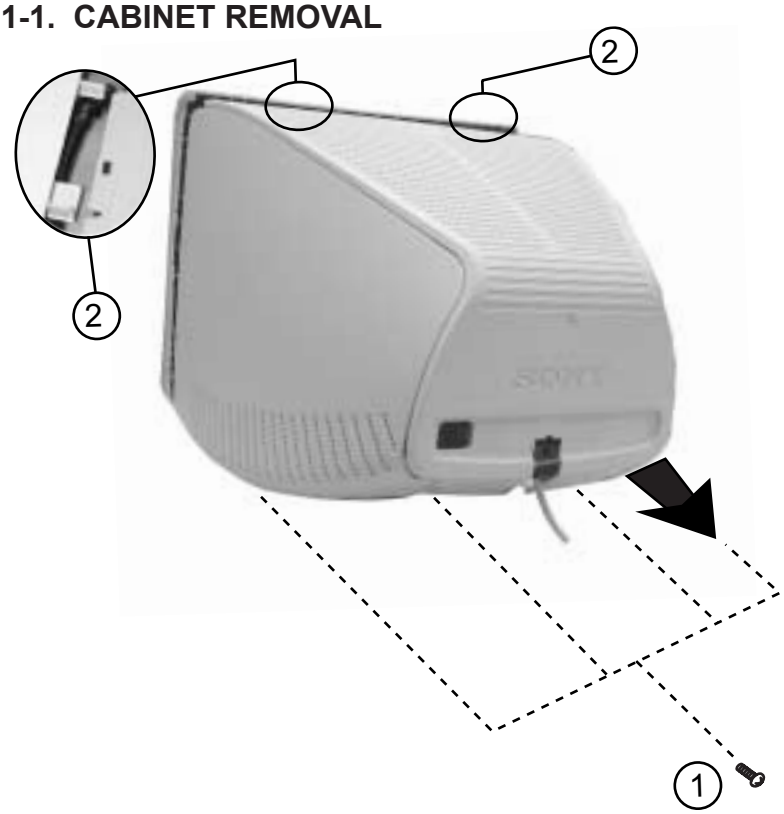


Figure B. Checking for earth ground.

SECTION 1: DISASSEMBLY

1-1. CABINET REMOVAL



(1) Remove (4) Screws (+BVTP 4 x 16)

(2) Release top claws - Insert the tip of a flathead screwdriver approximately 0.25" to unlock the claw. Gently lift up and then back to remove the cabinet.

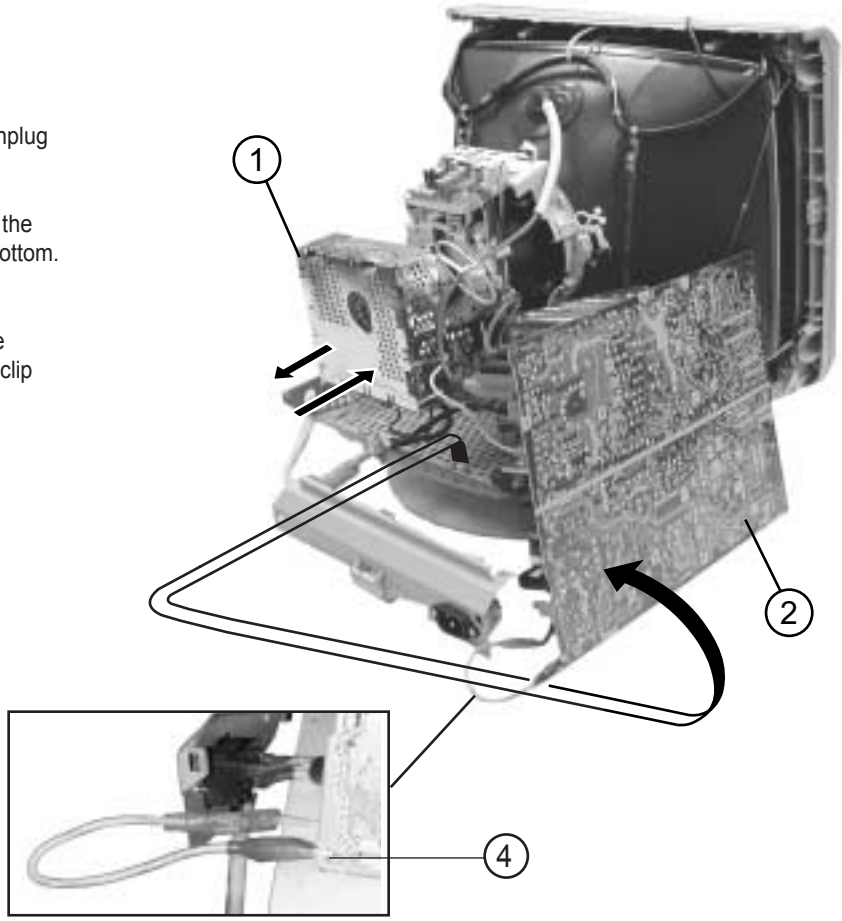
1-2. SERVICE POSITION

(1) Gently wiggle the A board back and forth to unplug it from the Neck Assembly.

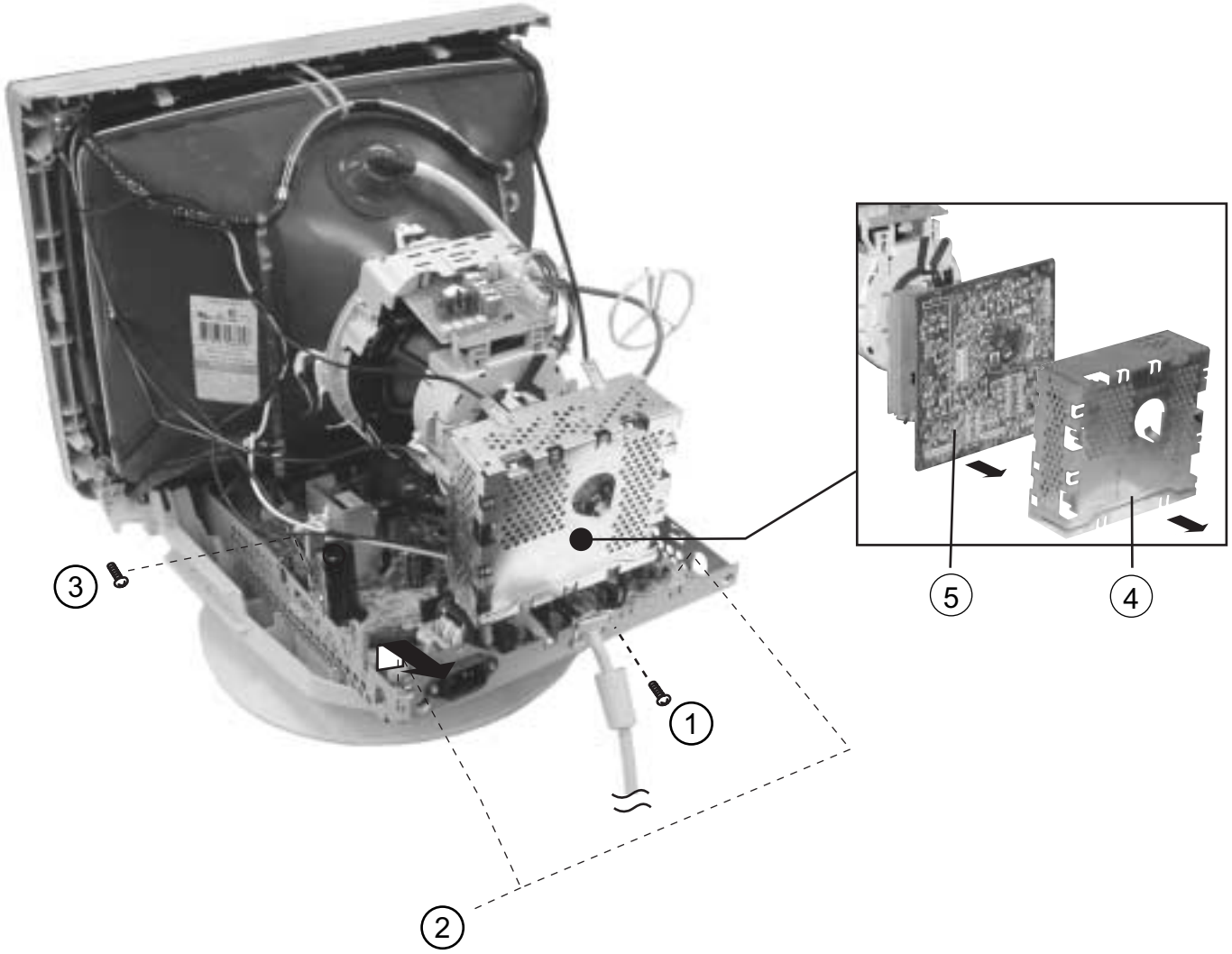
(2) Remove all necessary connections and rotate the D Board and rest it on its side to expose the bottom. Be sure to reconnect all wires.

(3) Fabricate a temporary ground wire with a male stakon connector on one end and an alligator clip on the other.

(4) Reconnect ground as shown below.



1-3. A & D BOARD REMOVAL



(1) Remove (1) screw (+BVTP 3 x 8) from the cable holder at the rear of the chassis base to release the cable.

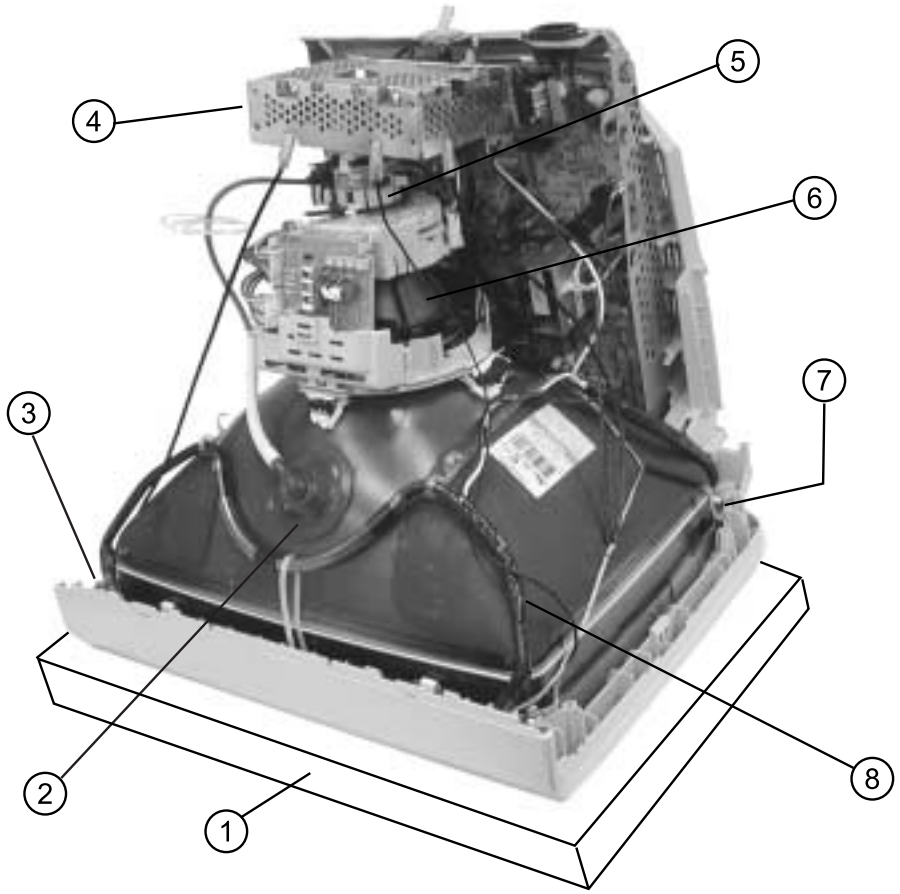
(2) Remove (2) screws (+BVTP 3 x 8) from the rear of the D Board and remove the rear of the chassis base.

(3) Remove remaining (7) screws (+BVTP 3 x 8) from the D Board. Lift the board up and out to remove.

(4) Remove the shield cover from the A board.

(5) Gently wiggle the A board back and forth, and pull it to remove.

1-4. PICTURE TUBE REMOVAL

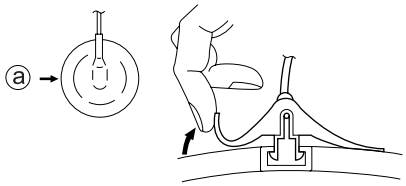


1. Place the unit face down on a cushion to avoid scratching.
2. Remove the anode cap.
3. Remove (4) screws (Screw (5) Tapping) from the CRT.
4. Remove the A board.
5. Remove the neck assembly.
6. Remove the deflection yoke.
7. Remove (2) screws (BVTP 4 x 16) from the base assembly and slide out to remove.
8. Remove the demagnetization coil.

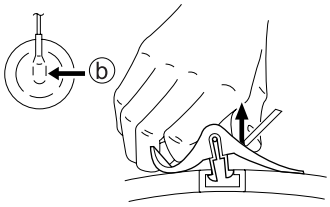
ANODE CAP REMOVAL

WARNING: High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT **before** attempting to remove the anode cap. Short between anode and coated earth ground strap of CRT.
NOTE: After removing the anode cap, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield, or carbon painted on the CRT.

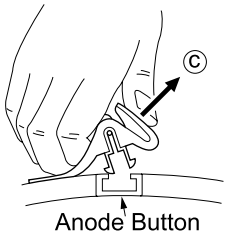
REMOVAL PROCEDURES



Turn up one side of the rubber cap in the direction indicated by arrow ⓐ.



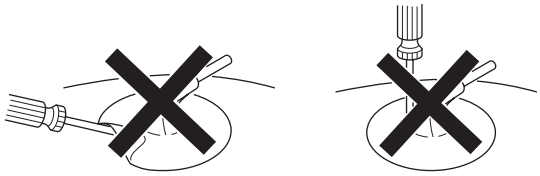
Use your thumb to pull the rubber cap firmly in the direction indicated by arrow ⓑ.



When one side of the rubber cap separates from the anode button, the anode cap can be removed by turning the rubber cap and pulling it in the direction of arrow ⓒ.

HOW TO HANDLE AN ANODE CAP

1. Do not use sharp objects which may cause damage to the surface of the anode cap.
2. To avoid damaging the anode cap, do not squeeze the rubber covering too hard. A material fitting called a shatter-hook terminal is built into the rubber.
3. Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



SECTION 2: SAFETY RELATED ADJUSTMENTS

When replacing parts shown in the table below, the following operational checks must be performed as a safety precaution against X-ray emissions from the unit.

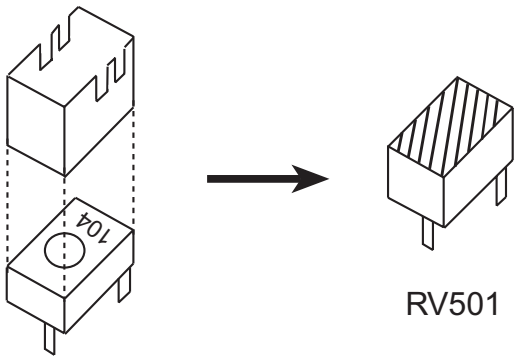
	Part Replaced (⋈)
HV ADJ	RV501

	Part Replaced (◪)
HV Regulator Circuit	D Board T501, IC501, RV501, R540, R541, R542, R544, R564, R567, R568, C532, C534, C539, C553, C554, C555, C556, C558, C561
HV HOLD DOWN Circuit	D Board T501, R510, R543, R547, R549, R552, R595, D515, D517, C540, C542, C544, IC607, IC901, C951
Beam Current Protector Circuit	D Board T501, R545, R546, R548, R550, R596, R934, C535, C541, IC605, IC607, IC901

※ Allow the unit to warm up for one minute prior to checking the following conditions.

2-1. HV REGULATOR CHECK

1. Input white cross hatch signal (fH = 80 kHz).
2. CONT maximum and BRT center.
3. Cut off Screen VR (G2).
4. Input voltage: 120 ± 2 VAC.
5. Confirm that the voltage is within the voltage range shown below:
   Standard voltage: 26.0 +0.3, -0.5 kV
6. When replacing components identified by ◪ , make sure to recheck the High Voltage.
7. Verify the High Voltage as shown above (26.0 +0.3, -0.5 kV) is within specification. If not, set H. SIZE data at minimum (-127) and then adjust RV501 on D Board (Adjustment target = 26.0 ± 0.2 kV).
8. After adjusting the High Voltage within specification, put the RV cover on RV501 as shown below and apply sufficient amount of RTV around RV501.



RV501

2-2. HV PROTECTOR CIRCUIT CHECK

1. Confirm that the voltage between cathode of D517 and GND is more than 27.0 VDC.
2. Using an external DC Power supply, apply the voltage shown below between cathode of D517 on D Board and GND, and confirm that the HV Hold-Down circuit works (Raster disappears). Apply DC Voltage: Less than 35.9 VDC.

Check Condition

- Input voltage: 120 ± 2 VAC
- Input signal: (fH =69 kHz), White Cross Hatch
- Controls: CONT (max) & BRT (center)
- B+ Voltage: 179 ± 3.0 VDC

2-3. BEAM PROTECTOR CHECK (SOFTWARE LOGIC)

1. Using an external current source, apply < 1.55mA between pin (11) of FBT (T501) and GND, and confirm that the raster fades out.

Check Condition

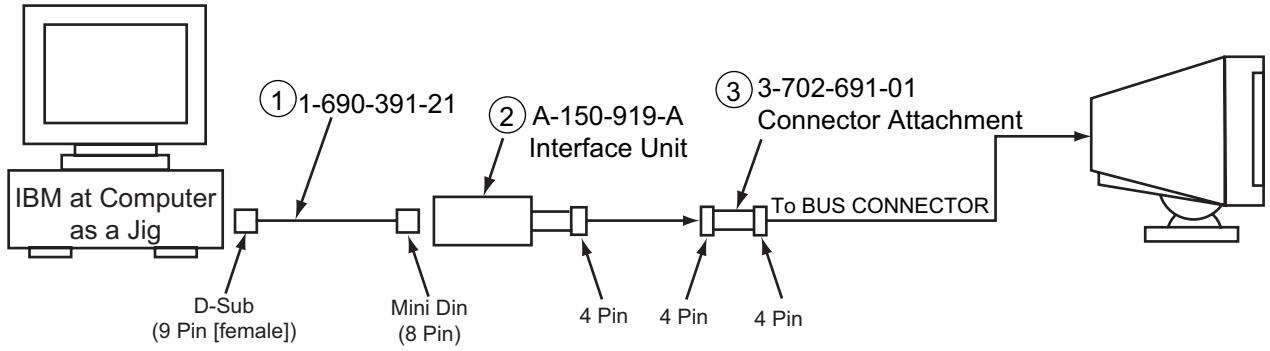
- Input voltage: 120 ± 2 VAC
- Input signal : (fH = 69 kHz), White Cross Hatch
- Controls: CONT (max) & BRT (center)

2-4. B+ VOLTAGE CHECK

1. Input white cross hatch (fH = 69 kHz) signal.
2. CONT (max) & BRT (center).
3. Input voltage: 110 ± 10 VAC.
   Note: Use NF power supply or make sure that distortion factor is 3% or less.
4. Confirm that the voltage is within the range shown below:
   Standard voltage: 179 ± 3.0 VDC

SECTION 3: ADJUSTMENTS

Connect the communication cable of the connector located on the D Board on the monitor. Run the service software and then follow the instructions.



* The Parts above ((1)-(3)) are necessary for DAS Adjustment.

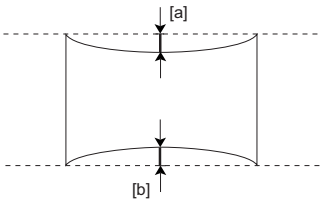
※ Allow a 30 minute warm-up period prior to making the following adjustments.

3-1. LANDING ROUGH ADJUSTMENT

1. Display the all white pattern.
2. Adjust the contrast to maximum value.
3. Display plain green pattern.
4. Slide the DY back and roughly adjust the plain green pattern with the purity magnet so that it is centered on the screen.
5. Adjust HCENTER by HCENTER Volume (RV502 on D Board).
6. Moving the DY forward, adjust so that an entire screen becomes pure green.
7. Adjust the DY tilt and lightly tighten the DY screw.

3-2. LANDING FINE ADJUSTMENT

1. Place the monitor in the Helmholtz coil.
2. Set TLH plate to zero position.
3. Display plain green pattern.
4. Degauss CRT face and iron parts with degauss equipment or hand-degausser.
5. Perform auto degauss.
6. Attach a wobbling coil to the specified position of CRT neck.
7. Put the sensor of landing checker to CRT face.
8. Adjust purity, DY position and DY tilt.
9. Tighten DY screw.
10. Perform auto degauss.
11. Adjust top and bottom pin by pitching DY up and down with two wedges so that [a] is equal to [b].

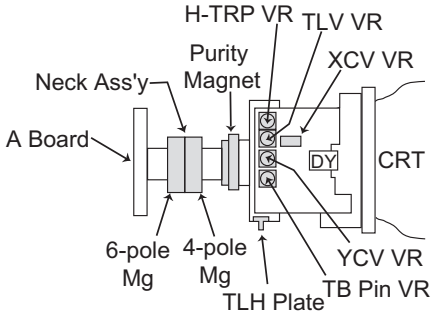


12. Adjust top and bottom pins to zero with TB. H.PIN VR. Also, V.SIZE should be adjusted at the same time becasue it is changed by TB. H.PIN VR.
13. Adjust V.Key (= H.Trapezoid) with H.TRP VR so that [a] is equal to [b] (See Section 3-4.).
14. If the corner landing is out of specification, use a disk magnet for the landing correction.
15. If disk magnets were used, perform an auto degauss.
16. Remove the wobbling coil and sensor.
17. Fix the purity magnet on DY with white paint.

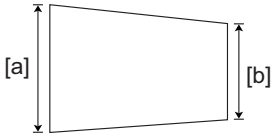
3-3. CONVERGENCE ROUGH ADJUSTMENT

1. Enter the white crosshatch signal.
2. Roughly adjust the horizontal (H.STAT) and vertical (V.STAT) convergence at four-pole magnet.
3. Roughly adjust HMC and VMC at six-pole magnet.

3-4. CONVERGENCE AND V. KEY (H. TRP) FINE ADJUSTMENT

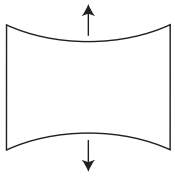


1. Display crosshatch pattern with green lines and black field.
2. Adjust V. Key (=H. Trapezoid) with H.TRP VR so that [a] is equal to [b].



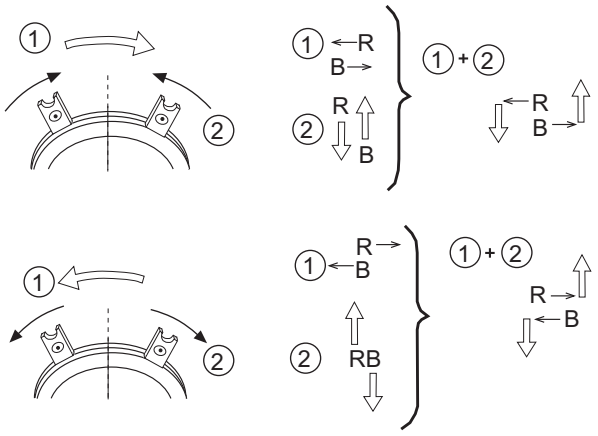
3. Adjust the TB Pin with TB Pin VR.

TB Pin Movement



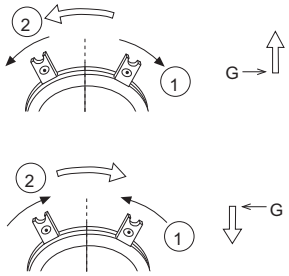
4. Adjust V.SIZE with "VSIZE".
5. Change "CONV_SW" to "0" and "MCR2" to "153".
6. Display crosshatch pattern with red and blue lines and black field.
7. Adjust H.STAT and V.STAT with 4 pole magnet. Use 4 pole magnet, not "HSTAT" and "VSTAT".

4 Pole Magnet



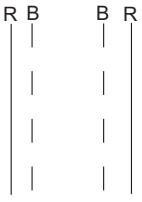
8. Display crosshatch pattern with white lines and black field.
9. Adjust HMC and VMC with 6 pole magnet.

6 Pole Magnet



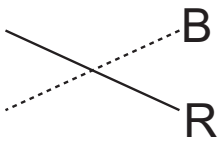
10. Display crosshatch pattern with red and blue lines and black field.
11. If necessary, repeat steps 5-8.
12. Change "CONV_SW" to "6".
13. Adjust H.TILT with TLH plate.

TLH Movement



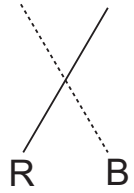
14. Adjust XCV with XCV VR.

XCV Movement



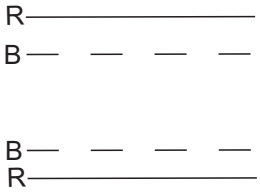
15. Adjust YCH with YCH VR.

YCH Movement



16. Adjust V.TILT with TLV VR.

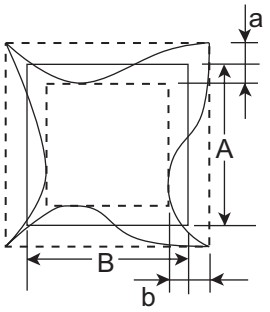
TLV Movement



17. If necessary, repeat steps 3-14 to make the optimum condition for the entire screen.
18. Fix 4-pole magnet, 6-pole magnet, TLH plate and XCV VR with white paint.

Zero Position Neck Ass'y

3-5. VERTICAL AND HORIZONTAL POSITION AND SIZE SPECIFICATION

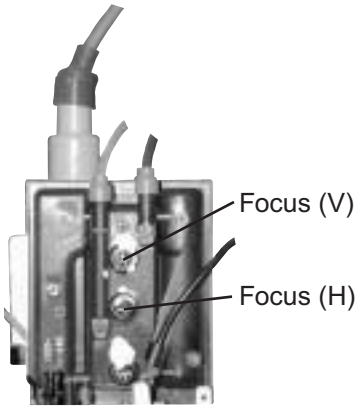


	$f_H \geq$ 0kHz	$f_H \leq$ 60kHz
a =	2.0 mm	2.4 mm
b =	2.0 mm	2.4 mm

A	B
234	312

3-6. FOCUS ADJUSTMENT

1. Adjust Focus (V) and Focus (H) for optimum focus.

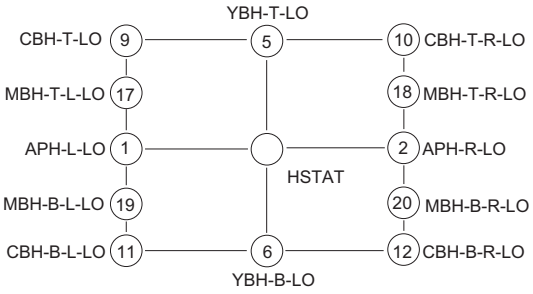


3-7. DIGITAL CONVERGENCE ADJUSTMENT

Convergence (Low) Mode

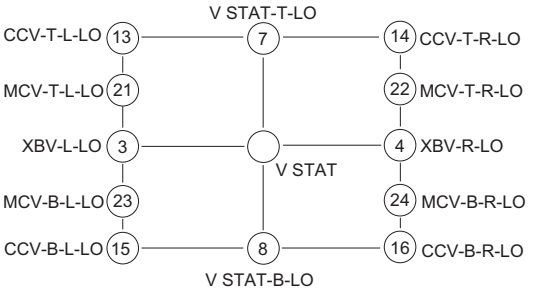
1. Adjust the H.STAT and V.STAT with "HSTAT" and "VSTAT".
2. Change "CONV_SW" to "7".

A. Horizontal Convergence



Adjust each misconvergence point in sequence.

B. Vertical Convergence



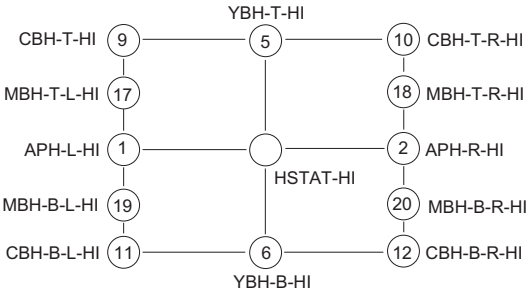
Adjust each misconvergence point in sequence.

3. Repeat the procedure of A and B so that the convergence of the entire screen is within the specification.

Convergence (High) Mode

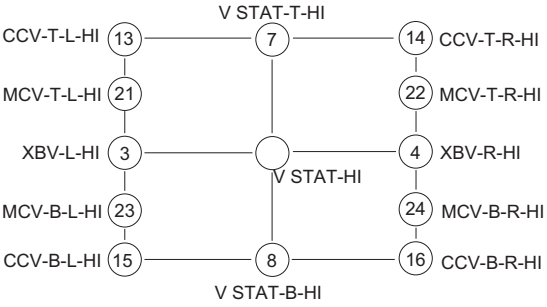
1. Adjust the H.STAT and V.STAT with "HSTAT-HI" and "VSTAT-HI".

A. Horizontal Convergence



Adjust each misconvergence point in sequence.

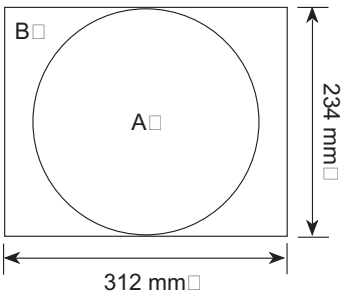
B. Vertical Convergence



Adjust each misconvergence point in sequence.

2. Repeat the procedure of A and B so that the convergence of the entire screen is within the specification.
3. Change "MCR2" to "170".

3-8. CONVERGENCE SPECIFICATION



A Zone:

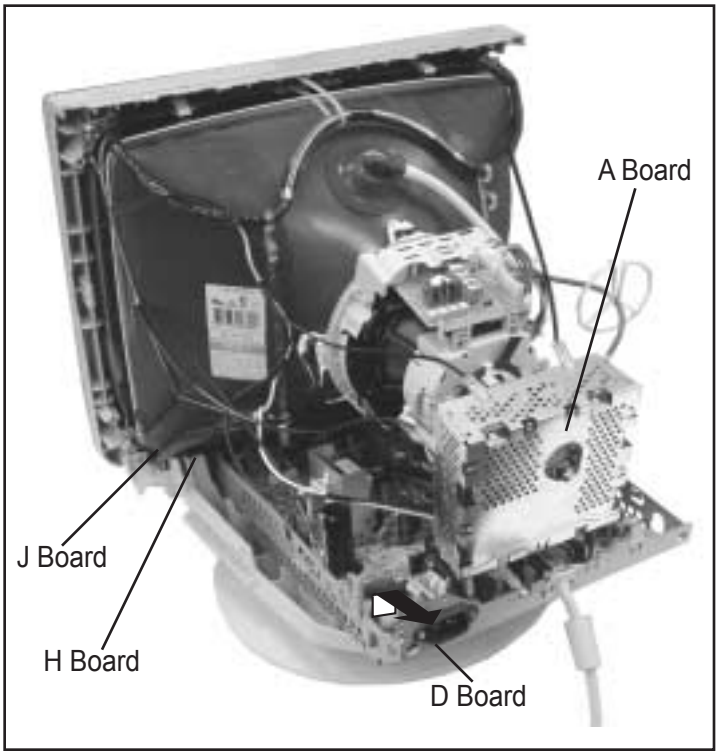
Primary Mode	Others
H: ≤ 0.25 mm	H: ≤ 0.3 mm
V: ≤ 0.25 mm	V: ≤ 0.3 mm

B Zone:

Primary Mode	Others
H: ≤ 0.3 mm	H: ≤ 0.4 mm
V: ≤ 0.3 mm	V: ≤ 0.4 mm

SECTION 4: DIAGRAMS

4-1. CIRCUIT BOARDS LOCATION



The components identified by shading and ⚠ symbol are critical for safety. Replace only with part number specified.

The symbol ▬ indicates a fast operating fuse and is displayed on the component side of the board. Replace only with fuse of the same rating as marked.

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Le symbole ▬ indique une fusible a action rapide. Doit etre remplace par une fusible de meme yaleur, comme maque.

The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be necessary, replace only with the value originally used.

When replacing components identified by ◪, make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by ⋈ and repeat the adjustment until the specified value is achieved. (See page 10)

When replacing the parts listed in the table below, it is important to perform the related adjustments.

	Part Replaced (⋈)
HV ADJ	RV501

	Part Replaced (◪)
HV Regulator Circuit	D Board T501, IC501, RV501, R540, R541, R542, R544, R564, R567, R568, C532, C534, C539, C553, C554, C555, C556, C558, C561
HV HOLD DOWN Circuit	D Board T501, R510, R543, R547, R549, R552, R595, D515, D517, C540, C542, C544, IC607, IC901, C951
Beam Current Protector Circuit	D Board T501, R545, R546, R548, R550, R596, R934, C535, C541, IC605, IC607, IC901

4-2. PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM INFORMATION

All capacitors are in µF unless otherwise noted. pF : µµF 50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. kΩ=1000Ω, MΩ=1000kΩ

Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm

Rating electrical power : $^1/_4$ W

$^1/_4$ W in resistance, $^1/_{10}$ W and $^1/_8$ W in chip resistance.

: nonflammable resistor.

: fusible resistor.

△ : internal component.

▭ : panel designation and adjustment for repair.

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a color-bar signal input.

Readings are taken with a 10MΩ digital multimeter.

Voltages are DC with respect to ground unless otherwise noted.

Voltage variations may be noted due to normal production tolerances.

All voltages are in V.

S : Measurement impossibillity.

: B+line.

: B-line (Actual measured value may be different).

: signal path (RF).

Circled numbers are waveform references.

REFERENCE INFORMATION

RESISTOR

: RN	METAL FILM
: RC	SOLID
: FPRD	NONFLAMMABLE CARBON
: FUSE	NONFLAMMABLE FUSIBLE
: RW	NONFLAMMABLE WIREWOUND
: RS	NONFLAMMABLE METAL OXIDE
: RB	NONFLAMMABLE CEMENT
: ※	ADJUSTMENT RESISTOR

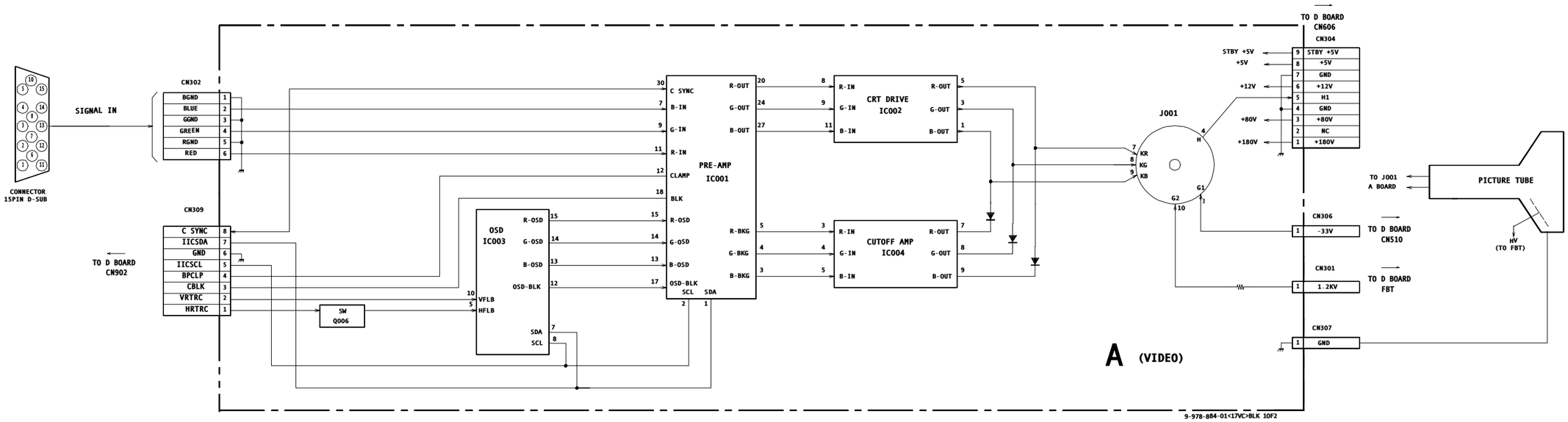
COIL

: LF-8L	MICRO INDUCTOR

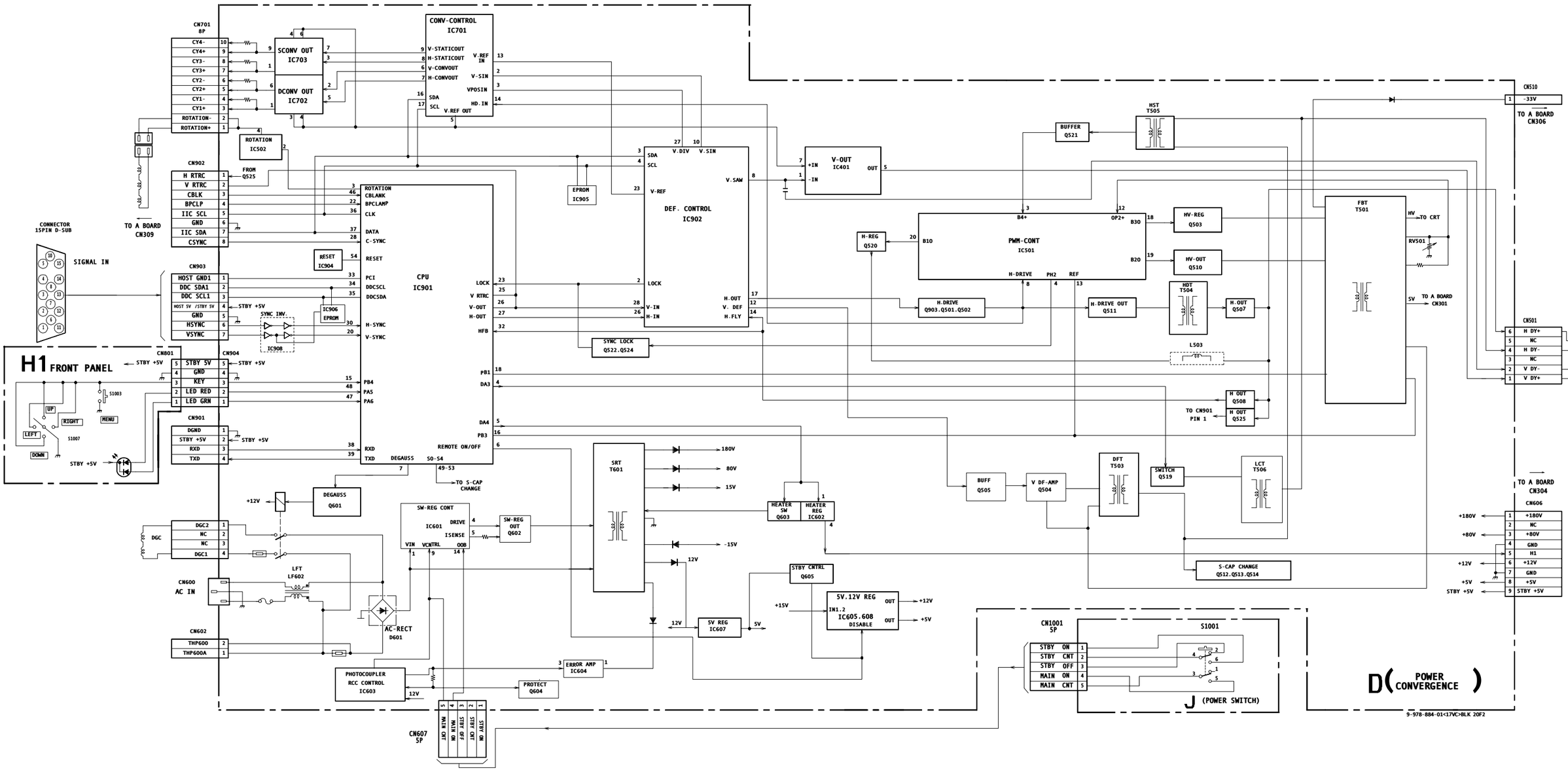
CAPACITOR

: TA	TANTALUM
: PS	STYROL
: PP	POLYPROPYLENE
: PT	MYLAR
: MPS	METALIZED POLYESTER
: MPP	METALIZED POLYPROPYLENE
: ALB	BIPOLAR
: ALT	HIGH TEMPERATURE
: ALR	HIGH RIPPLE

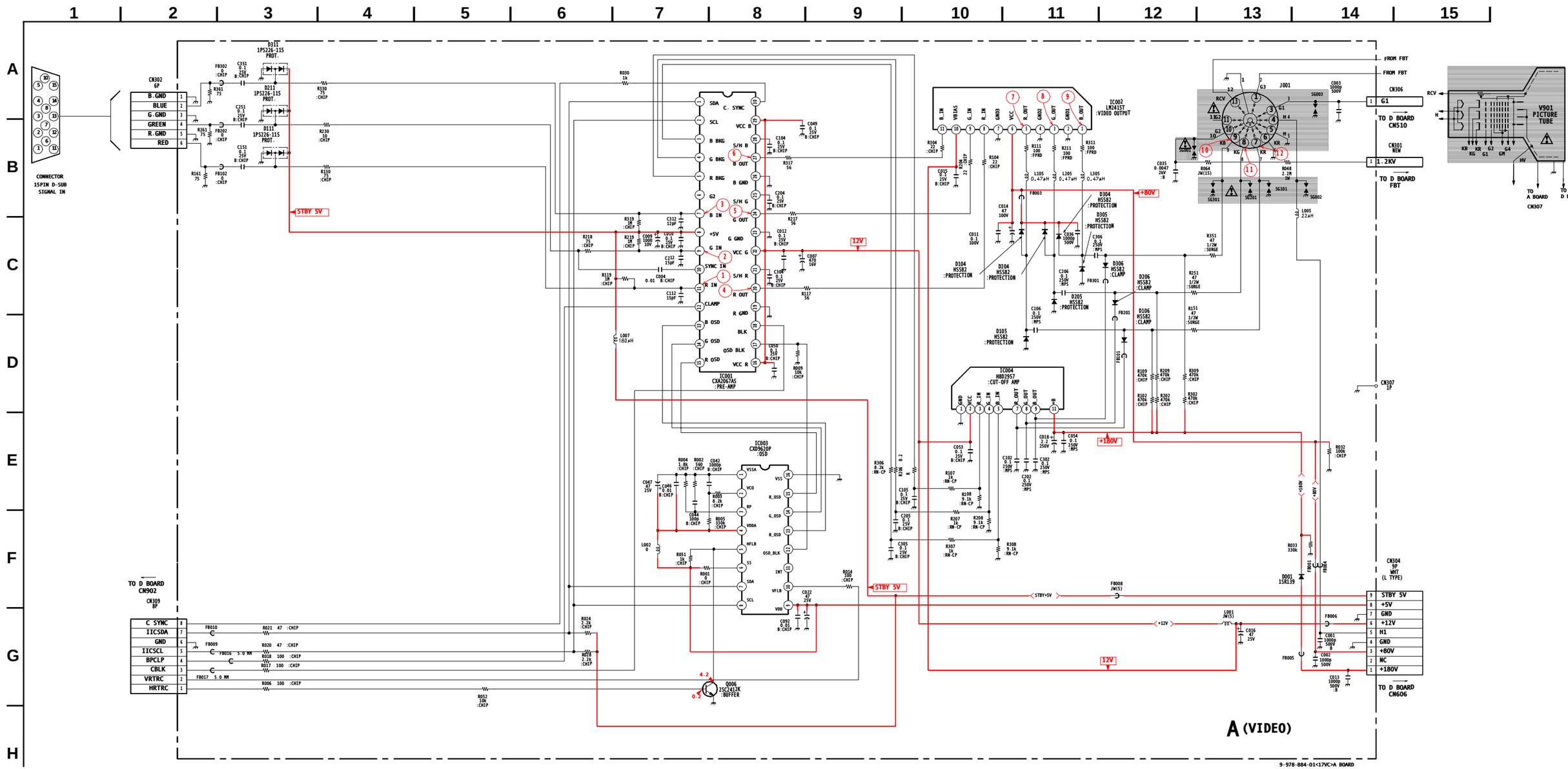
4-3 BLOCK DIAGRAMS AND SCHEMATICS
BLOCK DIAGRAM (1/2)



BLOCK DIAGRAM (2/2)



A BOARD - SCHEMATIC DIAGRAM



A BOARD IC VOLTAGE LIST

IC001		6	NC	13	0	20	2.1	27	1.9
pin	volt	7	2.1	14	0	21	3.3	28	3.3
1	4.7	8	4.7	15	0	22	11.9	29	11.9
2	4.5	9	2.1	16	11.9	23	GND	30	0.06
3	2.5	10	3	17	0	24	2		
4	2.3	11	2	18	0.8	25	3.3		
5	2.8	12	0.07	19	GND	26	GND		

IC002		6	79.4
pin	volt	7	GND
1	56.6	8	2.1
2	GND	9	2.0
3	56.3	10	11.9
4	GND	11	2
5	54.4		

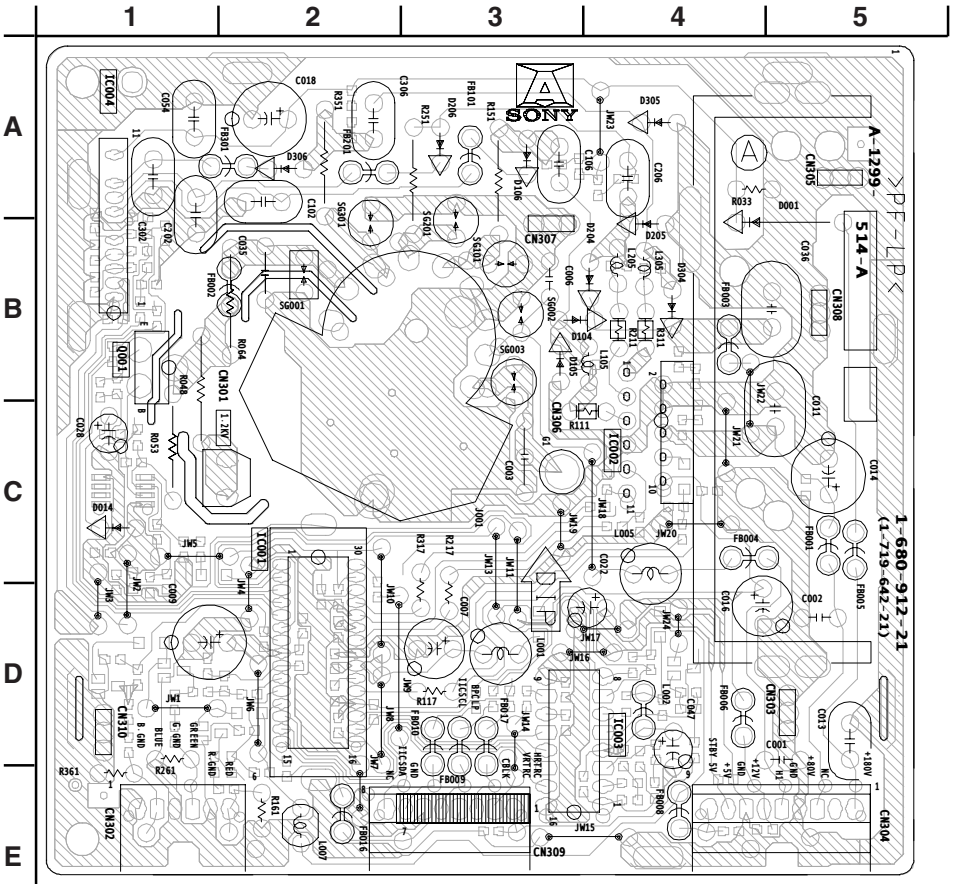
IC003		6	5.0	13	0
pin	volt	7	4.7	14	0
1	0.5	8	4.5	15	0
2	1.0	9	5.0	16	GND
3	1.0	10	0		
4	5.0	11	NC		
5	4.2	12	0		

IC004		6	NC
pin	volt	7	67.3
1	GND	8	61.0
2	11.9	9	62.4
3	4.8	10	NC
4	4.8	11	178.8
5	4.8		

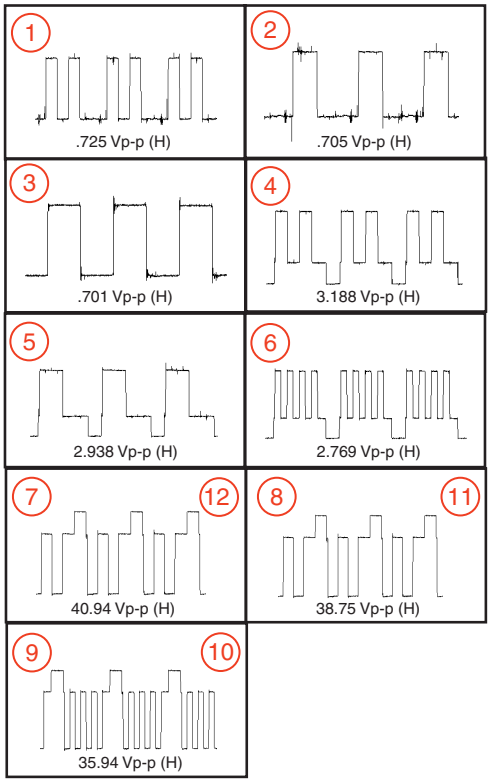
All voltages are in V

A [Video]

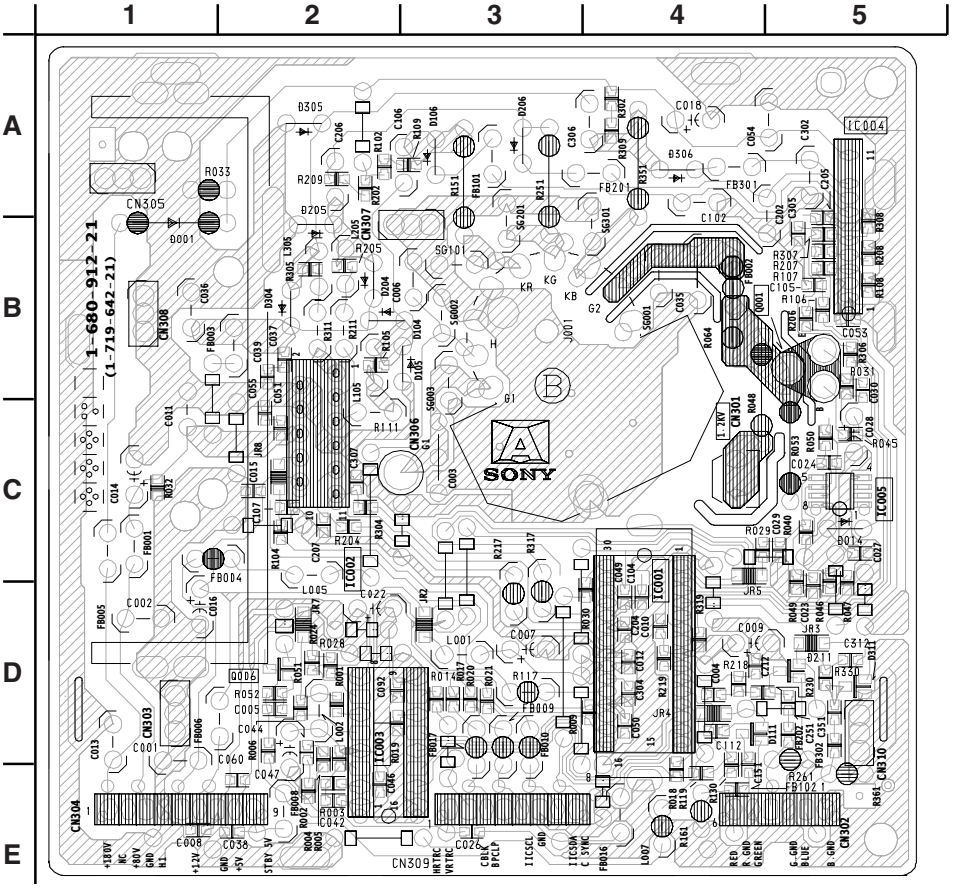
COMPONENT SIDE



A BOARD WAVEFORMS



CONDUCTOR SIDE

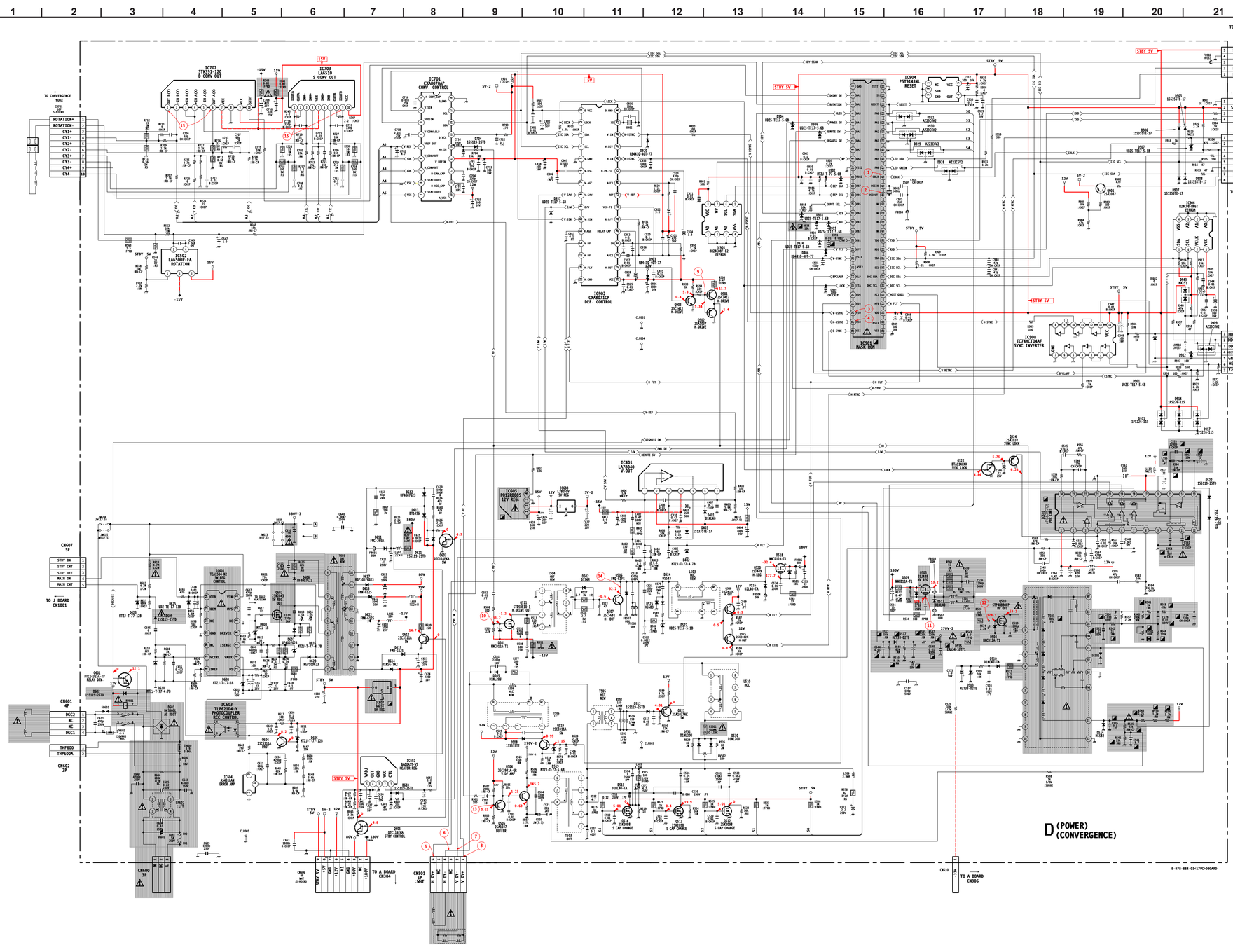


A BOARD LOCATOR LIST

DIODE		
	COMP	COND
D001	A-4	--
D104	B-3	--
D105	B-3	--
D106	A-3	--
D111	--	D-4
D204	B-3	--
D205	A-4	--
D206	A-3	--
D211	--	D-4
D304	B-4	--
D305	A-4	--
D306	A-2	--
D311	--	D-5

IC		
	COMP	COND
IC001	D-2	--
IC002	C-4	--
IC003	D-3	--
IC004	B-1	--

TRANSISTOR		
	COMP	COND
Q006	--	D-2

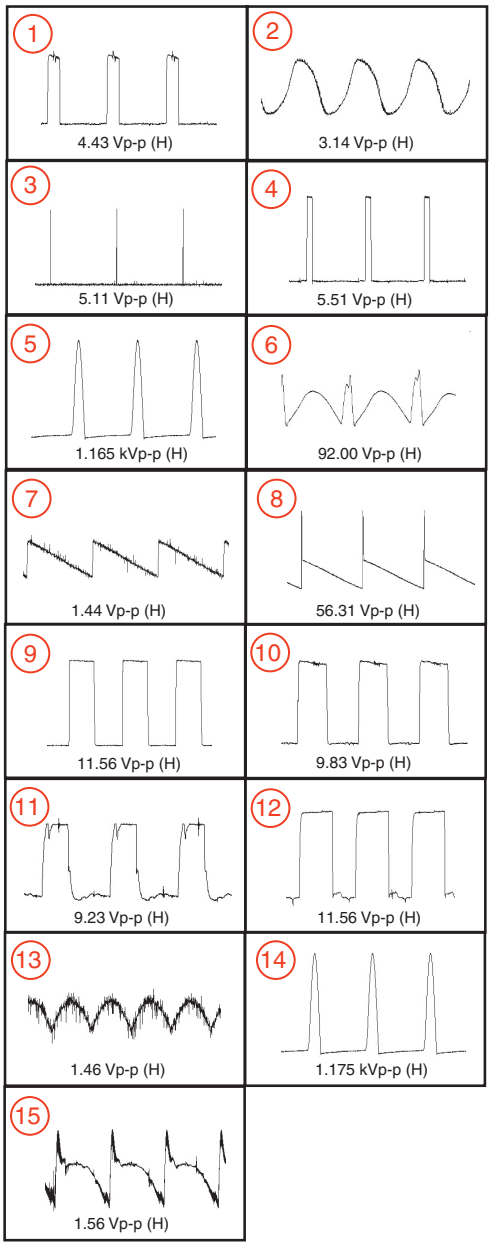

TO CONVERGENCE YOKE
CN650 6P
ROTATION+ 1
ROTATION- 2
CY1+ 3
CY1- 4
CY2+ 5
CY2- 6
CY3+ 7
CY3- 8
CY4+ 9
CY4- 10
IC702 STK391-120 D CONV OUT
IC703 LA6510 S CONV OUT
IC701 CXA8070AP CONV. CONTROL
IC502 LA6530P-FA ROTATION
IC902 CXA8071CP DEF. CONTROL
IC904 PST9140NL RESET
IC905 BR24C08F-W EEPROM
IC906 TC74HCT04AF SYNC INVERTER
IC901 MASK ROM
IC401 LA7840 V OUT
IC605 PQ12DD065 12V REG.
IC606 L78M05V 5V REG.
IC601 TDA16846-N2 SMPS CONTROL
IC603 TLP621GB-Y PHOTOCOUPLER BCC CONTROL
IC604 AS431AM DIODE ARY
IC607 BA6849AFS HEATER REG
IC605 STR71045A STBY CONTROL
CN607 5P
STBY ON 1
STBY CNT 2
STBY OFF 3
MAIN ON 4
MAIN CNT 5
TO J BOARD CN1001
CN601 4P
DGC2 1
NC 2
NC 3
DGC1 4
THP600 1
THP600A 2
CN602 2P
CN600 3P
TO A BOARD CN304
CN501 6P :WHT
TO A BOARD CN306
CN650
TO H1 BOARD CN803
CN904 5P
5 STBY 5V
4 GND
3 KEY
2 LED RED
1 LED GRN
CN901 5P :BLK :5-RICBD
5 D GND
4 STBY 5V
3 RXD
2 TXD
1 TXD
CN902 8P
8 H RTRC
7 V RTRC
6 CBLK
5 BPCLP
4 IIC SCL
3 GND
2 IIC SDA
1 CSYNC
TO A BOARD CN309
CN903 7P
7 HOST GND1
6 DDC SDA1
5 DDC SCL1
4 HOST 5V /STBY 5V
3 GND
2 H SYNC
1 V SYNC
CONNECTOR 15PIN D-SUB SIGNAL IN
D (POWER) (CONVERGENCE)
9-970-804-01<17VC>BOARD

D BOARD IC VOLTAGE LIST

IC401		IC601		IC607		IC703		32	0.4	19	10.7
pin	volt	pin	volt	pin	volt	pin	volt	33	0.5	20	9.9
1	1.6	1	77.4	1	5	1	-0.1	34	5	21	1.5
2	14.3	2	NC	2	0	2	0.0	35	5	22	10.4
3	-13.3	3	GND	3	GND	3	2.5	36	4.4	23	4.9
4	-14.4	4	-75.7	IC608		4	2.5	37	4.7	24	5.1
5	0.3	5	0.0	pin	volt	5	-14.8	38	5	25	4
6	13.8	6	-65.7	1	12.1	6	2.5	39	5	26	0.4
7	1.6	7	-66.1	2	5	7	2.5	40	NC	27	4.9
IC501		8	-75.1	3	GND	8	0.2	41	NC	28	0
pin	volt	9	-74.9	IC701		9	0.2	42	NC	29	0.4
1	12.1	10	NC	pin	volt	10	14.7	43	NC	30	GND
2	4.7	11	GND	1	4.8	IC901		44	0.1	IC904	
3	4	12	NC	2	4.9	pin	volt	45	2.4	pin	volt
4	6.3	13	0	3	4.9	1	0.1	46	0.5	1	GND
5	8.8	14	6.1	4	4.8	2	4.9	47	0.5	2	GND
6	6.2	IC602		5	4.9	3	2.7	48	3.7	3	GND
7	GND	pin	volt	6	4.9	4	1.6	49	5	4	5.0
8	0.2	1	3.0	7	4.9	5	4.8	50	0.3	5	5.0
9	GND	2	8.7	8	4.9	6	4.8	51	5	IC905	
10	8.4	3	GND	9	4.8	7	0	52	5	pin	volt
11	4.6	4	6.3	10	12.1	8	NC	53	5	1	GND
12	5.8	5	1.2	11	4.1	9	5	54	5	2	GND
13	5.8	IC603		12	4.9	10	GND	55	NC	3	GND
14	5.8	pin	volt	13	4.9	11	5	56	GND	4	GND
15	7.1	1	9.3	14	4.4	12	5	IC902		5	5
16	11.6	2	8.2	15	1.1	13	5	pin	volt	6	5
17	12.1	3	-73.9	16	4.7	14	0.5	1	2.2	7	5
18	8.8	4	-65.3	17	4.4	15	5	2	4.9	8	5
19	9.4	IC604		18	GND	16	4.3	3	4.7	IC908	
20	8.2	pin	volt	IC702		17	NC	4	4.5	pin	volt
21	0	1	2.5	pin	volt	18	4	5	GND	1	0
22	4.7	2	GND	1	-0.1	19	-0.2	6	3.9	2	5
23	4	3	6.9	2	0.0	20	0.1	7	6	3	5
24	4	IC605		3	2.2	21	NC	8	4.9	4	0
IC502		pin	volt	4	2.2	22	0.1	9	4	5	GND
pin	volt	1	14.7	5	2.2	23	4.9	10	5	6	NC
1	1.1	2	12.1	6	0.0	24	5	11	6.8	7	GND
2	1.1	3	GND	7	-14.8	25	0.0	12	4.6	8	5
3	-14.9	4	4.8	8	GND	26	0	13	NC	9	0
4	-2.8			9	14.7	27	0.4	14	0.4	10	0.4
5	14.7			10	3.2	28	0.1	15	GND	11	4.7
						29	GND	16	11.7	12	4.7
						30	0.4	17	0.4	13	0
						31	5	18	4.9	14	5

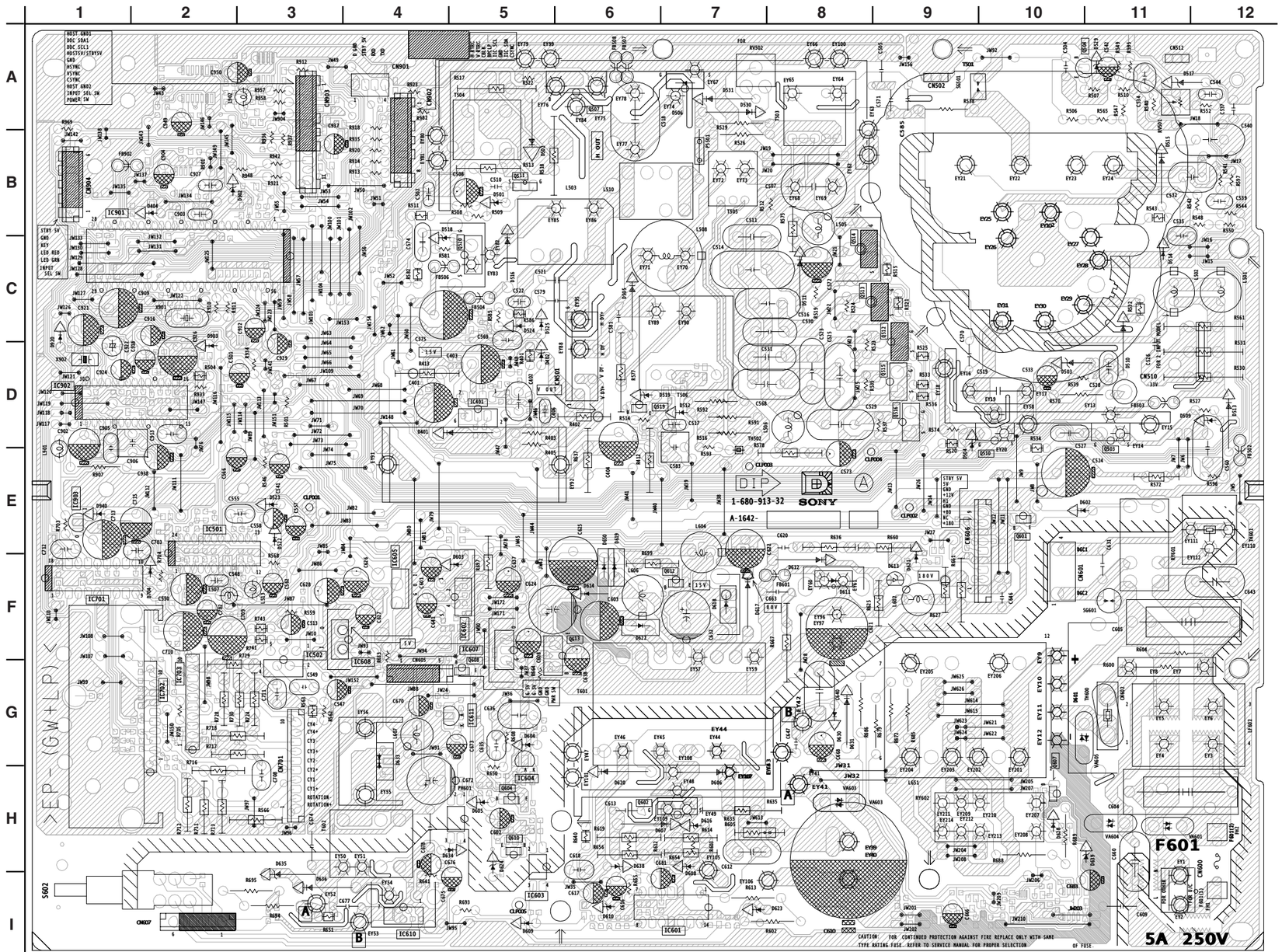
All voltages are in V

D BOARD WAVEFORMS



D [POWER] [CONVERGENCE]

COMPONENT SIDE

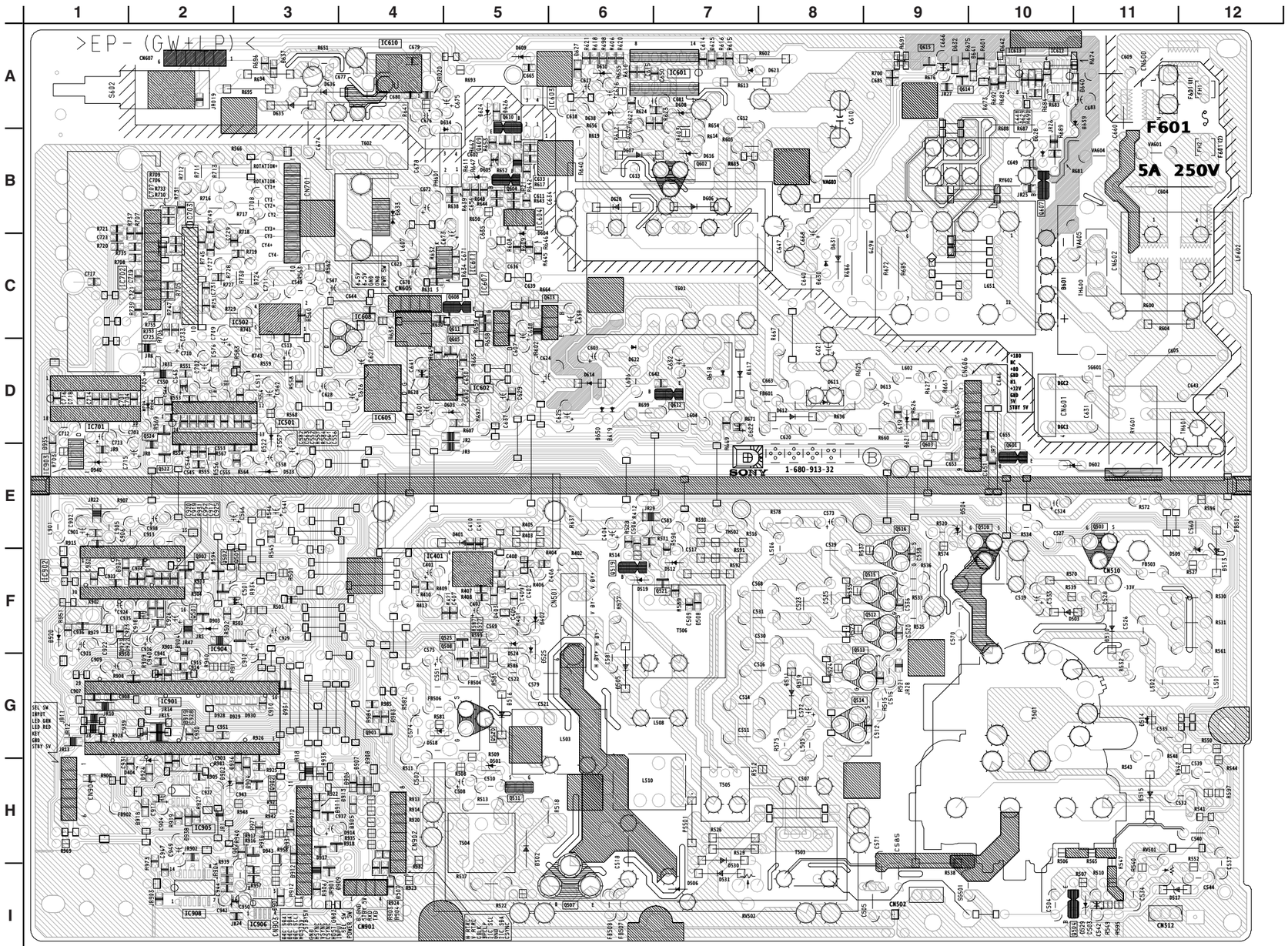

1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G H I
1-680-913-32
SONY
A-1642-
F601
5A 250V
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE REPLACE ONLY WITH SAME TYPE RATING FUSE. REFER TO SERVICE MANUAL FOR PROPER SELECTION OF FUSE

D BOARD LOCATOR LIST

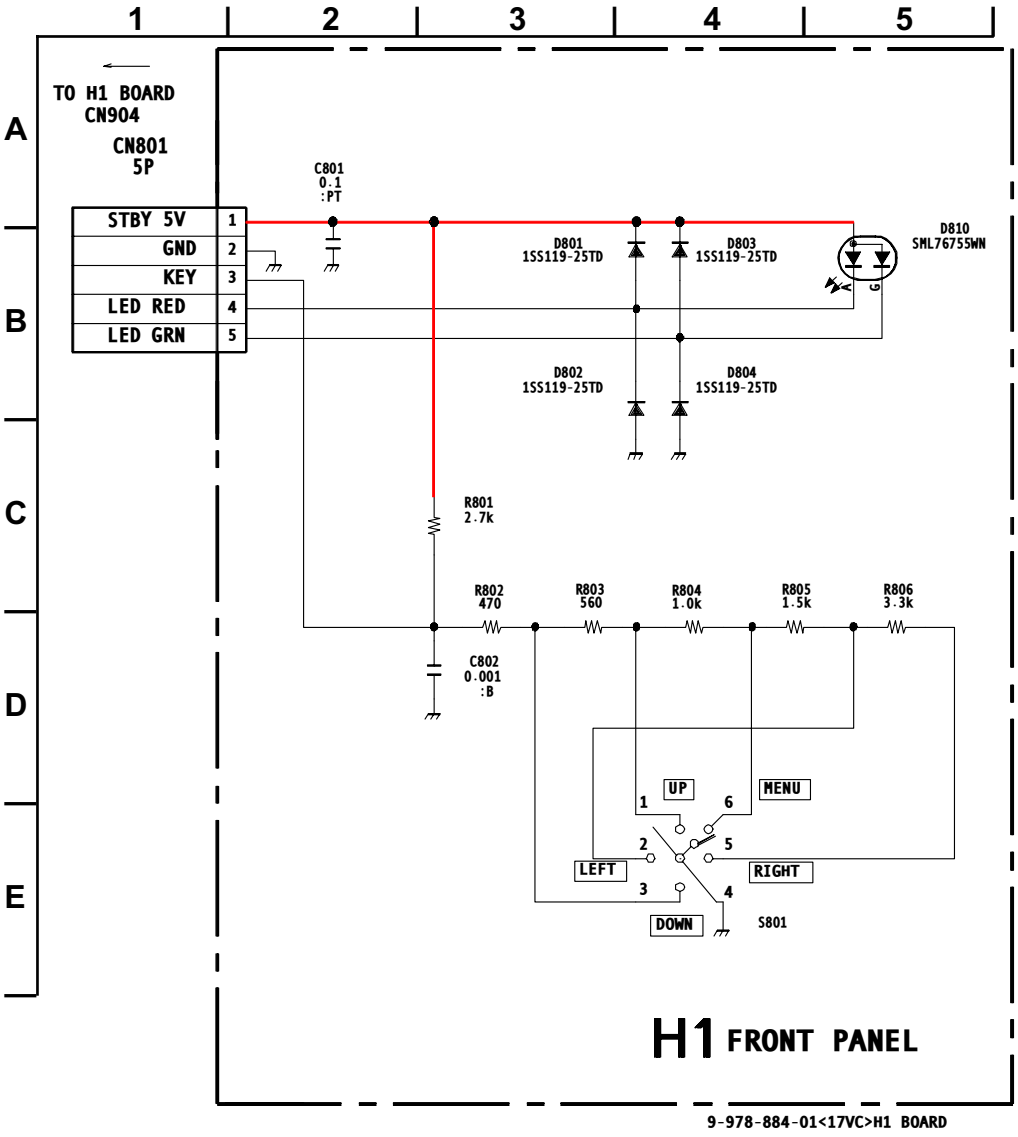
DIODE			DIODE			IC		
	COMP	COND		COMP	COND		COMP	COND
D401	D-4	--	D611	F-8	--	IC401	D-5	--
D402	D-5	--	D612	F-8	--	IC501	E-2	--
D403	--	F-5	D613	F-9	--	IC502	G-3	--
D404	B-2	--	D614	F-6	--	IC601	I-7	--
D501	B-5	--	D616	H-7	--	IC602	F-5	--
D502	B-5	--	D617	F-7	--	IC603	I-5	--
D503	D-10	--	D618	F-7	--	IC604	H-5	--
D504	E-9	--	D619	E-6	--	IC605	F-4	--
D505	C-6	--	D620	H-6	--	IC607	F-5	--
D506	A-7	--	D621	F-9	--	IC608	F-4	--
D507	--	I-4	D622	F-6	--	IC701	F-1	--
D508	--	F-7	D623	I-7	--	IC702	G-2	--
D509	D-11	--	D625	--	I-7	IC703	G-2	--
D510	D-11	--	D638	H-6	--	IC901	B-1	--
D511	C-8	--	D704	F-2	--	IC902	D-1	--
D512	D-7	--	D901	--	I-3	IC904	--	F-2
D513	D-12	--	D902	--	G-2	IC905	--	H-2
D514	C-11	--	D903	D-2	--	IC908	--	I-2
D515	B-11	--	D904	--	H-3	TRANSISTOR		
D516	C-5	--	D905	--	H-4		COMP	COND
D517	A-11	--	D906	--	H-3	Q501	--	F-2
D518	C-4	--	D907	--	H-3	Q502	--	F-2
D519	F-6	--	D908	--	H-4	Q503	--	E-11
D522	E-3	--	D909	--	I-4	Q504	A-11	--
D523	E-3	--	D911	--	H-4	Q505	--	F-3
D524	C-5	--	D912	--	I-3	Q507	--	I-6
D525	C-5	--	D914	--	H-4	Q508	--	G-5
D527	--	F-5	D917	--	H-4	Q510	--	E-10
D530	A-7	--	D918	--	H-2	Q511	--	H-5
D531	A-7	--	D919	--	G-2	Q512	--	F-9
D601	G-10	--	D920	D-1	--	Q513	--	G-9
D602	E-11	--	D924	--	H-2	Q514	--	G-8
D603	F-5	--	D928	--	G-2	Q519	--	F-6
D605	--	B-5	D929	--	G-3	Q520	C-5	--
D606	H-7	--	D930	--	G-3	Q521	--	F-6
D607	--	B-6	D931	--	G-3	Q522	--	E-2
D608	H-7	--	D936	--	H-2	Q524	--	D-2
D609	I-5	--	D937	--	F-1	Q525	--	F-4
D610	I-6	--	D943	--	H-3	Q601	--	E-10
						Q602	--	B-7
						Q603	--	E-9
						Q604	--	B-5
						Q605	--	D-5
						Q612	F-6	--
						Q901	--	G-4
						Q903	--	F-2

D [POWER] [CONVERGENCE]

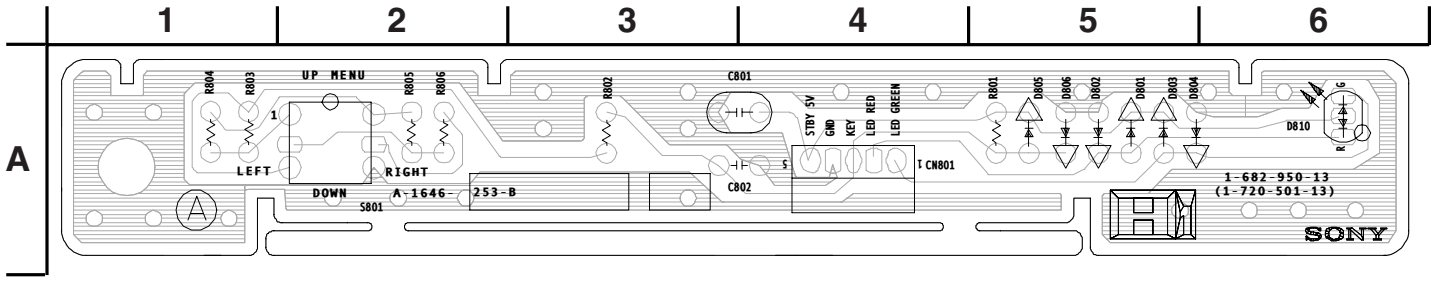
CONDUCTOR SIDE



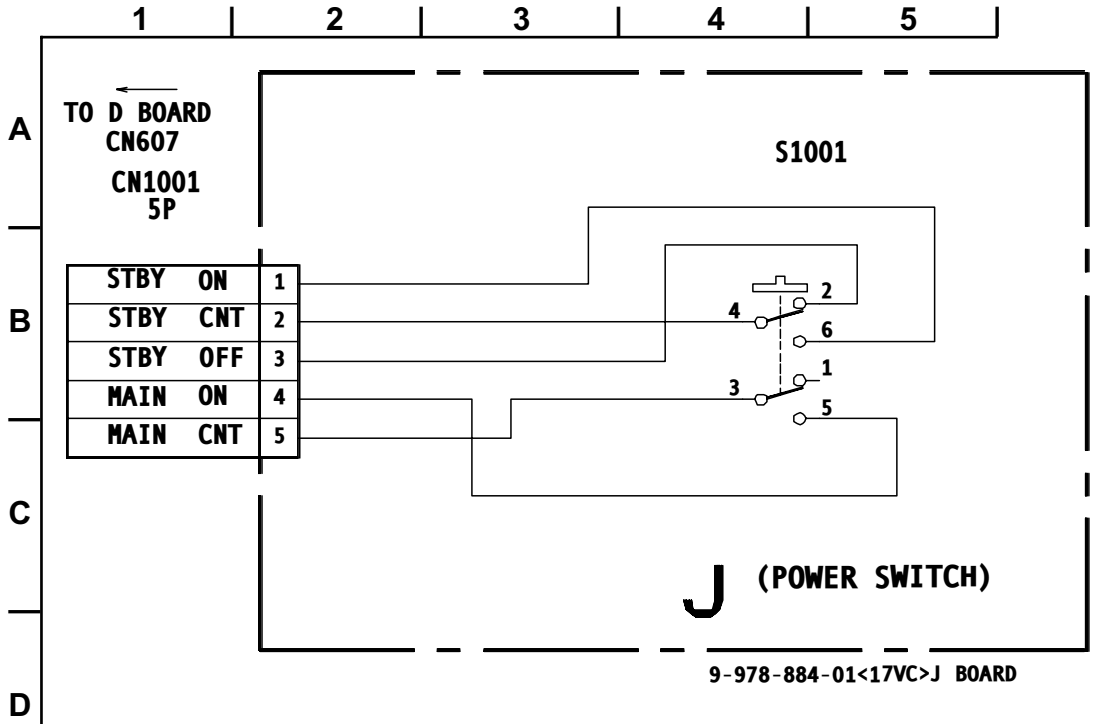
H1 BOARD - SCHEMATIC DIAGRAM



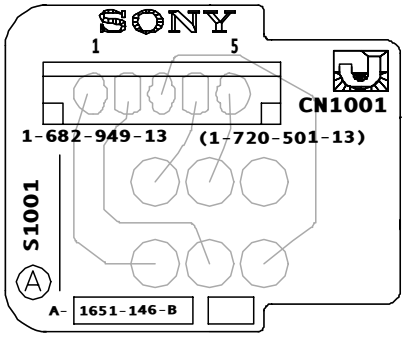
H1 [Front Panel]



J BOARD - SCHEMATIC DIAGRAM

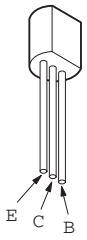


J

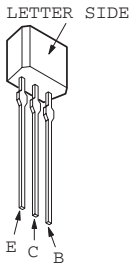


4-4. SEMICONDUCTORS

2SC2610

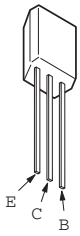


2SA1175-HFE
2SC2785-HFE
DTC114TSA
2SC3311A-QRSTA

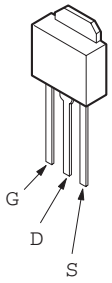


1SS119-25
RD5.1ESB2
RD5.6ESB2
RD18ESB2
RD10ESB2
MTZJ-4.7C
MTZJ-T-77-18
RB441Q-40T-77

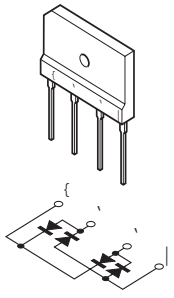
DTC143ESA



2SK2605LBSONY
2SK3155-01
2SK2098-01MR-F119
2SK2843LBS2SONY
IRFU110A



D4SB60L



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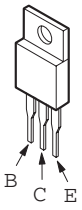
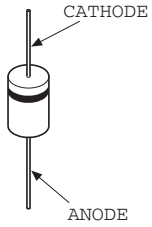
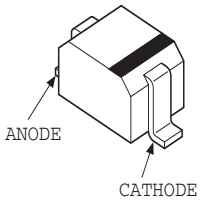


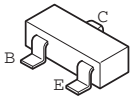
MTZJ-T-77-12B
ERC81-004
EGP10D
RGP10JPKG23
RGP10DG23
RL3Z-LF014-302



HSS83TD
1SS355TE-17
HSS82



2SC1623-L5L6
2SA1037AK-T146-R
2SC3941A-Q(TA)
DTA114EKA-T146



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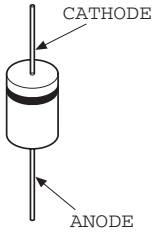
D1NL40-TA2
UF4007G23
RGP02-20EL-6394
ERB91-02



SECTION 5: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

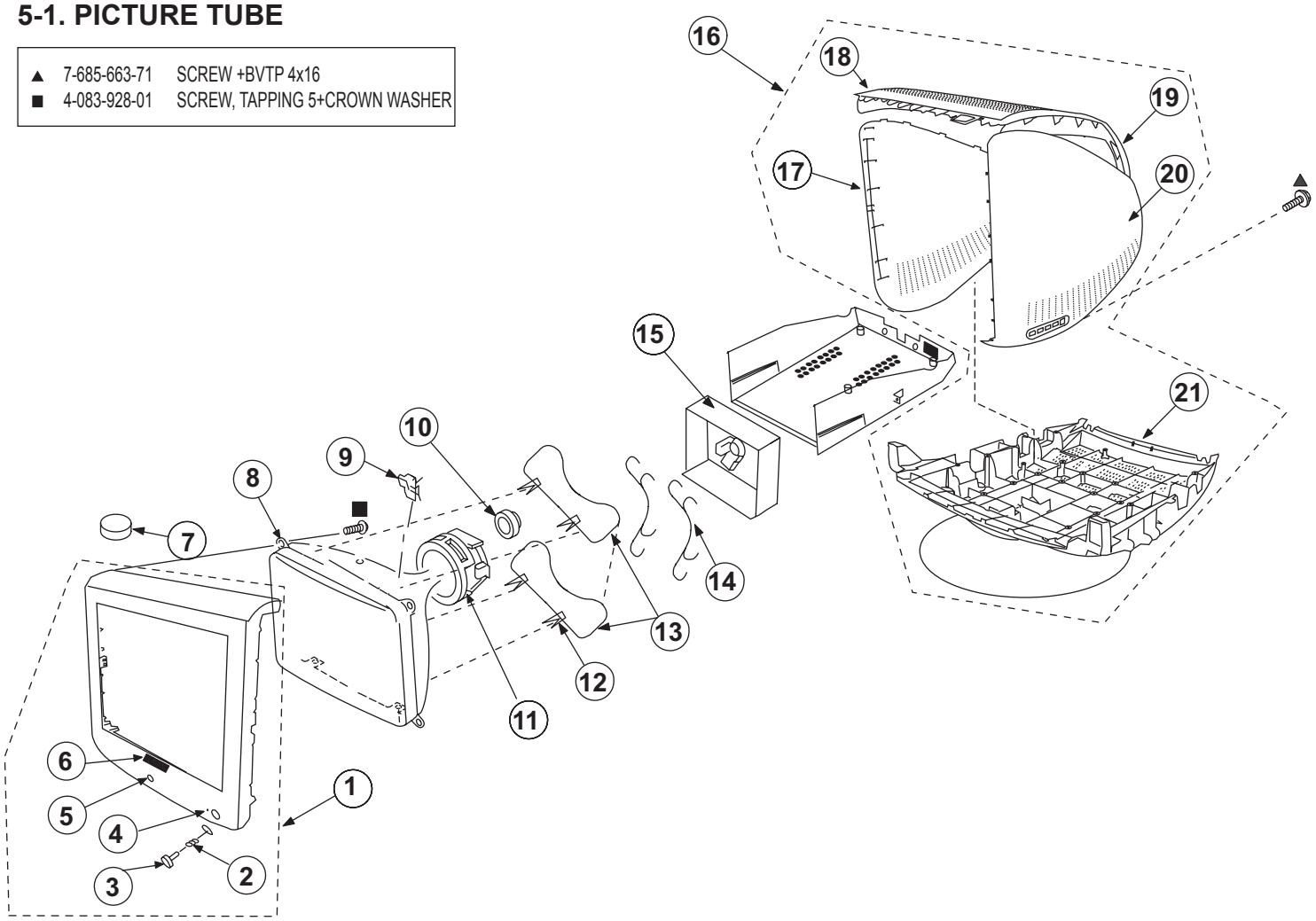
*** Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.**

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

5-1. PICTURE TUBE

▲ 7-685-663-71 SCREW +BVTP 4x16
■ 4-083-928-01 SCREW, TAPPING 5+CROWN WASHER



	REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]
	1	X-4039-841-1	BEZEL ASSY	2-6
	2	4-081-485-01	SPRING, COMPRESSION	
	3	4-086-076-01	BUTTON, POWER	
	4	4-086-077-01	GUIDE, LED	
*	5	4-086-075-01	BUTTON, MENU	
	6	4-042-353-42	EMBLEM(NO.7), SONY	
	7	1-452-032-00	MAGNET,DISC	
⚠	8	8-738-556-05	CRT 17TKB(SDS)(LIGHT GLASS)	
	9	4-040-897-01	SPACER, DY	
⚠	10	1-452-923-41	NECK ASSEMBLY (NA-2915)	
⚠	11	8-451-522-21	DY Y17TKJ3-S	

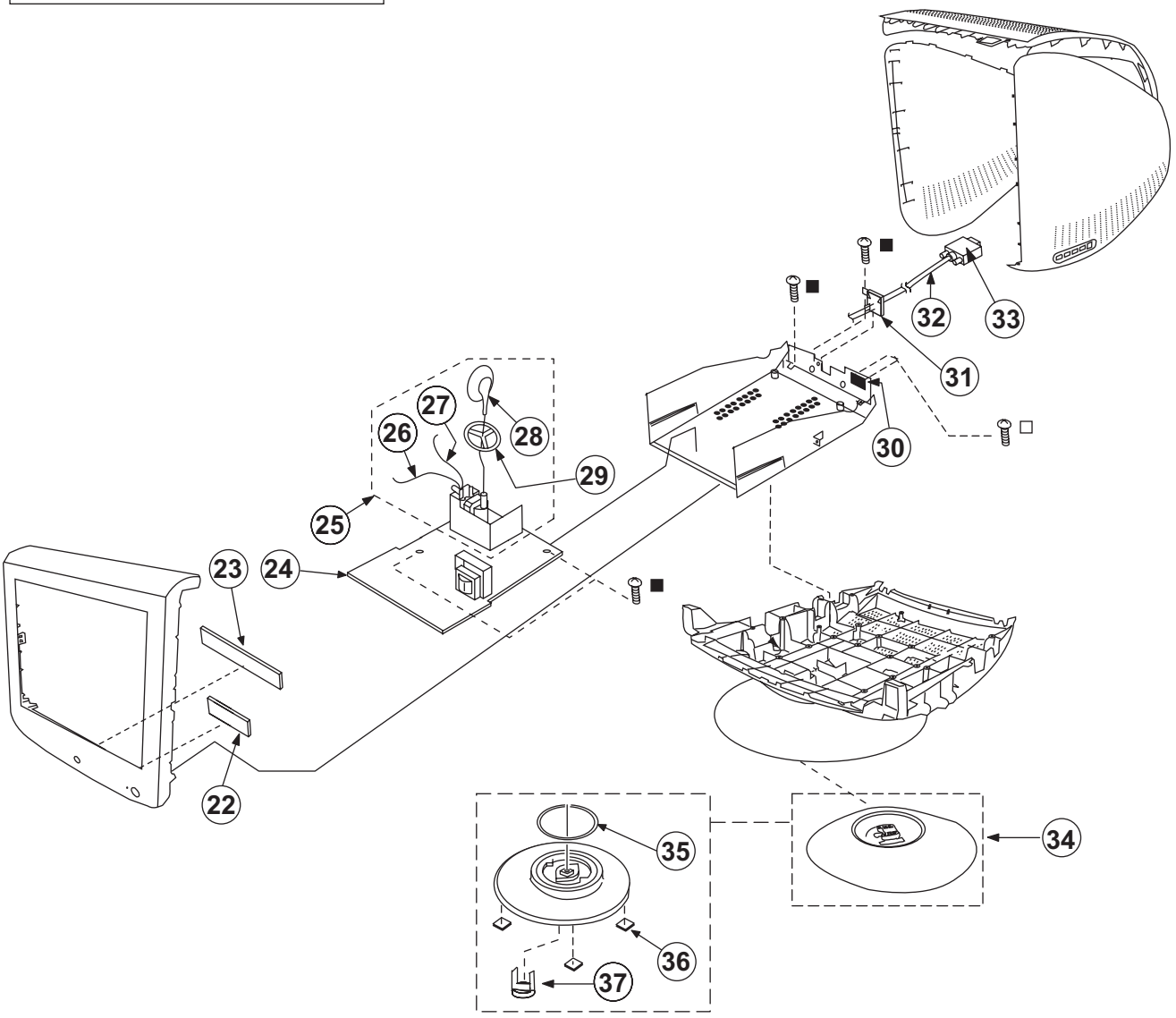
	REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]
	12	4-045-123-31	HOLDER, DEGAUSSING COIL	
⚠	13	1-419-092-21	COIL, DEGAUSSING	
*	14	4-080-810-21	BAND (L), DEGAUSS COIL	
*	15	A-1300-165-A	A COMPLETE PC BOARD	
*	16	X-4039-842-1	CABINET ASSY	17-21
	17	4-086-081-01	COVER, SIDE(L)	
	18	4-086-084-01	COVER, TOP	
*	19	4-086-695-01	LABEL, INFORMATION	
	20	4-086-080-01	COVER, SIDE(R)	
	21	4-086-082-01	COVER,BOTTOM	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

5-2. CHASSIS

■ 7-685-646-79 SCREW +BVTP 3x8
□ 4-052-345-01 SCREW, (3x8) (+K) TAPPING

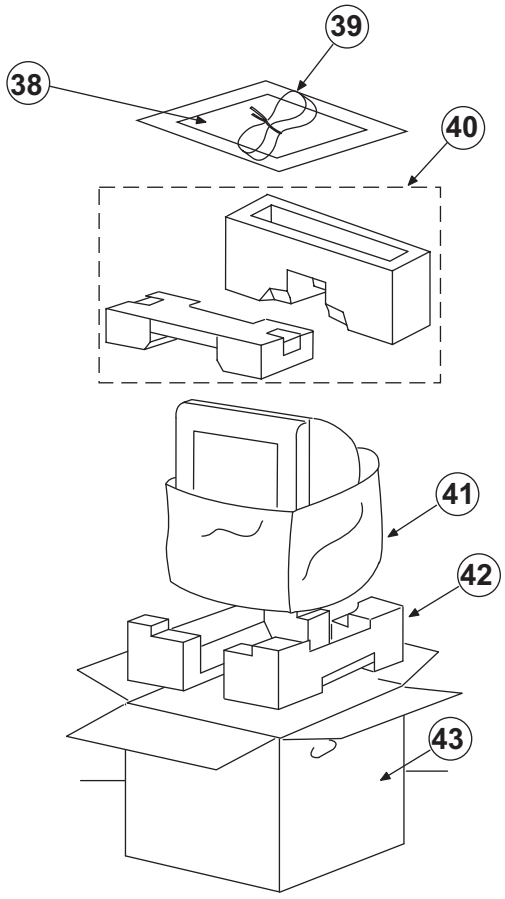


	REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]
*	22	A-1400-274-A	J MOUNTED PC BOARD	
*	23	A-1400-275-A	H1 MOUNTED PC BOARD	
*	24	A-1300-166-A	D COMPLETE PC BOARD	
			THE HIGH VOLTAGE LEADS ASSOCIATED WITH THE FBT ON THIS BOARD ARE NOT INCLUDED AND MUST BE ORDERED SEPARATELY. (SEE 26-28)	
⚠	25	1-453-365-11	FBT ASSY (NX-4405/VQ)	26-28
	26	1-900-805-62	CONNECTOR ASSY, G2	
	27	1-900-805-55	WIRE ASSY, FOCUS LEAD	
	28	1-251-643-31	CAP ASSY, HIGH-VOLTAGE	
	29	3-704-372-71	HOLDER, HV CABLE	
⚠	30	1-816-348-11	INLET, AC	
*	31	4-086-073-01	HOLDER, CABLE	
	32	1-757-472-61	CABLE, CABLE ASSY (15D-SUB CONNECTOR)	
	33	4-086-078-01	COVER, CABLE	
	34	X-4039-843-1	BASE ASSY, STAND	35-37
	35	4-080-491-01	RING, TILT	
*	36	4-060-533-01	CUSHION	
	37	4-080-252-03	STOPPER	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

5-3. PACKING MATERIALS



	REF. NO.	PART NO.	DESCRIPTION
⚠	39	1-790-881-11	CORD SET, POWER
	40	4-086-966-01	CUSHION, UPPER
	41	4-041-254-01	BAG, PROTECTION
*	42	4-086-969-01	CUSHION, LOWER
*	43	4-086-967-01	CARTON, INDIVIDUAL

SECTION 6: ELECTRICAL PARTS LIST

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components in this manual identified by the following symbol: ⧓ indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.

*** Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.**

RESISTORS
- **All resistors are in ohms**
- **F : nonflammable**
- **All variable and adjustable resistors have characteristic curve B, unless otherwise noted.**

When ordering parts by reference number, please include the board name.

A

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	*** A-1300-165-A**	**A BOARD, COMPLETE**			
	4-086-072-01	CASE, VIDEO			
	4-382-854-01	SCREW (M3X8), P, SW (+)			
	CAPACITOR				
C001	1-162-318-11	CERAMIC	0.001µF	10%	500V
C002	1-162-318-11	CERAMIC	0.001µF	10%	500V
C003	1-102-050-00	CERAMIC	0.01µF	20%	500V
C004	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C007	1-126-935-11	ELECT	470µF	20%	16V
C009	1-126-926-11	ELECT	1000µF	20%	10V
C010	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C011	1-130-777-00	MYLAR	0.1µF	10%	100V
C012	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C013	1-162-318-11	CERAMIC	0.001µF	10%	500V
C014	1-128-562-11	ELECT	47µF	20%	100V
C015	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C016	1-126-947-11	ELECT	47µF	20%	25V
C018	1-107-649-11	ELECT	2.2µF	20%	250V
C022	1-126-947-11	ELECT	47µF	20%	25V
C035	1-162-114-00	CERAMIC	.0047µF	2KV	
C036	1-162-318-11	CERAMIC	0.001µF	10%	500V
C042	1-163-009-91	CERAMIC CHIP	0.001µF	10%	50V
C044	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C046	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C047	1-126-947-11	ELECT	47µF	20%	25V
C049	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C050	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C053	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C054	1-137-528-11	MYLAR	0.1µF	10%	250V
C092	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C102	1-137-528-11	MYLAR	0.1µF	10%	250V
C104	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C105	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C106	1-137-528-11	MYLAR	0.1µF	10%	250V
C112	1-163-231-11	CERAMIC CHIP	15pF	5%	50V
C151	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C202	1-137-528-11	MYLAR	0.1µF	10%	250V
C204	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C205	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C206	1-137-528-11	MYLAR	0.1µF	10%	250V
C212	1-163-231-11	CERAMIC CHIP	15pF	5%	50V
C251	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C302	1-137-528-11	MYLAR	0.1µF	10%	250V
C304	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C305	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C306	1-137-528-11	MYLAR	0.1µF	10%	250V
C312	1-163-229-11	CERAMIC CHIP	12pF	5%	50V
C351	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
	CONNECTOR				
CN301	1-785-879-11	CONNECTOR, ONE TOUCH			
* CN302	1-815-022-11	PIN,CONNECTOR (WITH PWB) 6P			
* CN304	1-564-524-11	PLUG,CONNECTOR 9P			
CN306	1-506-108-41	PIN,CONNECTOR (TERMINAL PIN)			
CN307	1-695-915-11	TAB (CONTACT)			
* CN309	1-564-523-11	PLUG,CONNECTOR 8P			
	DIODE				
D001	8-719-970-02	DIODE 1SR139-400T31			
D104	8-719-970-83	DIODE HSS82-TJ			
D105	8-719-970-83	DIODE HSS82-TJ			
D106	8-719-970-83	DIODE HSS82-TJ			
D111	8-719-062-51	DIODE 1PS226-115			
D204	8-719-970-83	DIODE HSS82-TJ			
D205	8-719-970-83	DIODE HSS82-TJ			
D206	8-719-970-83	DIODE HSS82-TJ			
D211	8-719-062-51	DIODE 1PS226-115			
D304	8-719-970-83	DIODE HSS82-TJ			
D305	8-719-970-83	DIODE HSS82-TJ			
D306	8-719-970-83	DIODE HSS82-TJ			
D311	8-719-062-51	DIODE 1PS226-115			

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A

REF. NO.	PART NO.	DESCRIPTION	VALUES
	FERRITE BEAD		
FB001	1-412-911-11	FERRITE	0µH
FB003	1-412-911-11	FERRITE	0µH
FB004	1-412-911-11	FERRITE	0µH
FB005	1-412-911-11	FERRITE	0µH
FB006	1-412-911-11	FERRITE	0µH
FB009	1-412-911-11	FERRITE	0µH
FB010	1-412-911-11	FERRITE	0µH
FB101	1-412-911-11	FERRITE	0µH
FB102	1-216-295-91	SHORT	
FB201	1-412-911-11	FERRITE	0µH
FB202	1-216-295-91	SHORT	
FB301	1-412-911-11	FERRITE	0µH
FB302	1-216-295-91	SHORT	
	IC		
IC001	8-752-094-09	IC CXA2067AS	
IC002	8-759-596-65	IC LM2415T	
IC003	8-759-698-56	IC CXD9620P	
IC004	8-749-016-27	IC H8D2957	
	JACK		
⚠ J001	1-451-524-11	SOCKET, CRT	
	CHIP CONDUCTOR		
JR002	1-216-296-11	SHORT	
JR003	1-216-296-11	SHORT	
JR004	1-216-296-11	SHORT	
JR005	1-216-296-11	SHORT	
JR007	1-216-296-11	SHORT	
JR008	1-216-296-11	SHORT	
	COIL		
L002	1-412-911-11	FERRITE	0µH
L005	1-400-054-21	INDUCTOR	22µH
L007	1-410-485-21	INDUCTOR	180µH
L105	1-410-750-41	INDUCTOR	0.47µH
L205	1-410-750-41	INDUCTOR	0.47µH
L305	1-410-750-41	INDUCTOR	0.47µH
	TRANSISTOR		
Q006	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	RESISTOR				
R001	1-216-295-91	SHORT			
R002	1-216-043-91	RES-CHIP	560	5%	1/10W
R003	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R004	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R005	1-216-109-00	RES-CHIP	330K	5%	1/10W
R006	1-216-025-11	RES-CHIP	100	5%	1/10W
R009	1-216-073-91	RES-CHIP	10K	5%	1/10W
R014	1-216-025-11	RES-CHIP	100	5%	1/10W
R017	1-216-025-11	RES-CHIP	100	5%	1/10W
R018	1-216-025-11	RES-CHIP	100	5%	1/10W
R020	1-216-017-91	RES-CHIP	47	5%	1/10W
R021	1-216-017-91	RES-CHIP	47	5%	1/10W
R024	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R028	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R030	1-216-049-11	RES-CHIP	1K	5%	1/10W
R032	1-216-097-11	RES-CHIP	100K	5%	1/10W
R033	1-247-891-00	CARBON	330K	5%	1/4W
R048	1-219-398-51	METAL	2.2M	5%	1W
R051	1-216-049-11	RES-CHIP	1K	5%	1/10W
R052	1-216-073-91	RES-CHIP	10K	5%	1/10W
R102	1-216-113-00	RES-CHIP	470K	5%	1/10W
R104	1-216-009-91	RES-CHIP	22	5%	1/10W
R106	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R107	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R108	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W
R109	1-216-113-00	RES-CHIP	470K	5%	1/10W
R111	1-249-405-11	CARBON	100	5%	1/4W
R117	1-249-402-11	CARBON	56	5%	1/4W
R119	1-216-121-11	RES-CHIP	1M	5%	1/10W
R130	1-216-022-00	RES-CHIP	75	5%	1/10W
R151	1-219-742-11	CARBON	47	5%	1/2W
R161	1-215-394-00	METAL	75	1%	1/4W
R202	1-216-113-00	RES-CHIP	470K	5%	1/10W
R204	1-216-009-91	RES-CHIP	22	5%	1/10W
R206	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R207	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R208	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W
R209	1-216-113-00	RES-CHIP	470K	5%	1/10W
R211	1-249-405-11	CARBON	100	5%	1/4W
R217	1-249-402-11	CARBON	56	5%	1/4W
R218	1-216-022-00	RES-CHIP	75	5%	1/10W
R219	1-216-121-11	RES-CHIP	1M	5%	1/10W
R230	1-216-001-00	RES-CHIP	10	5%	1/10W
R251	1-219-742-11	CARBON	47	5%	1/2W
R261	1-215-394-00	METAL	75	1%	1/4W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R302	1-216-113-00	RES-CHIP	470K	5%	1/10W
R304	1-216-009-91	RES-CHIP	22	5%	1/10W
R306	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R307	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R308	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W
R309	1-216-113-00	RES-CHIP	470K	5%	1/10W
R311	1-249-405-11	CARBON	100	5%	1/4W
R317	1-249-402-11	CARBON	56	5%	1/4W
R319	1-216-121-11	RES-CHIP	1M	5%	1/10W
R330	1-216-022-00	RES-CHIP	75	5%	1/10W
R351	1-219-742-11	CARBON	47	5%	1/2W
R361	1-215-394-00	METAL	75	1%	1/4W

SPARK GAP

⚠ SG001	1-519-422-11	GAP, SPARK	
⚠ SG002	1-517-499-21	GAP, SPARK	
⚠ SG003	1-517-499-21	GAP, SPARK	
⚠ SG101	1-517-499-21	GAP, SPARK	
⚠ SG201	1-517-499-21	GAP, SPARK	
⚠ SG301	1-517-499-21	GAP, SPARK	

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*** A-1300-166-A D BOARD, COMPLETE**

THE HIGH VOLTAGE LEADS ASSOCIATED WITH THE FBT ON THIS BOARD ARE NOT INCLUDED AND MUST BE ORDERED SEPARATELY.

	1-251-643-31	CAP ASSY, HIGH-VOLTAGE
	1-900-805-55	WIRE ASSY, FOCUS LEAD
	1-900-805-62	CONNECTOR ASSY, G2
	3-710-578-01	COVER, VOLUME, 6 MOLD
	4-382-854-01	SCREW (M3X8), P, SW (+)
	4-382-854-11	SCREW (M3X10), P, SW (+)
	*7-322-065-48	RUBBER, SILICONE RTV (KE-3490)

CAPACITOR

C401	1-107-491-91	ELECT	1000µF	20%	25V
C402	1-137-959-51	MYLAR	0.47µF	5%	100V
C403	1-128-749-91	ELECT	220µF	20%	50V
C404	1-126-942-61	ELECT	1000µF	20%	25V
C405	1-104-760-11	CERAMIC CHIP	0.047µF	10%	50V
C406	1-130-481-00	MYLAR	0.0068µF	5%	50V
C407	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C408	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C410	1-164-005-11	CERAMIC CHIP	0.47µF		25V
C501	1-126-964-11	ELECT	10µF	20%	50V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C502	1-137-150-11	MYLAR	0.01µF	5%	50V
C503	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C504	1-102-030-00	CERAMIC	330pF	10%	500V
C506	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C507	1-125-979-11	FILM	0.3µF	5%	400V
C508	1-128-526-11	ELECT	100µF	20%	25V
C509	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C510	1-102-228-00	CERAMIC	470pF	10%	500V
C511	1-117-660-21	FILM	0.12µF	5%	250V
C512	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C514	1-115-522-11	FILM	1µF	5%	250V
C515	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C516	1-117-412-11	FILM	0.24µF	5%	250V
C517	1-137-150-11	MYLAR	0.01µF	5%	50V
C518	1-137-718-11	FILM	4300pF	3%	1.8KV
⚠ C519	1-117-621-21	FILM	1200pF	3%	1.2KV
C520	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C521	1-107-444-11	CERAMIC	100pF	5%	2KV
C522	1-136-684-51	MYLAR	0.0022µF	10%	100V
C523	1-119-860-11	FILM	0.082µF	5%	250V
C524	1-135-843-51	ELECT	33µF	20%	200V
⚠ C526	1-164-646-11	CERAMIC	2200pF	10%	500V
⚠ C527	1-137-105-11	MYLAR	0.01µF	10%	250V
C528	1-107-364-11	MYLAR	0.01µF	10%	200V
C530	1-119-858-11	FILM	0.068µF	5%	250V
C531	1-113-979-51	FILM	0.047µF	5%	250V
⚠ C532	1-137-401-11	MYLAR	0.22µF	10%	100V
C533	1-126-960-11	ELECT	1µF	20%	50V
⚠ C534	1-137-419-11	MYLAR	0.033µF	10%	100V
⚠ C535	1-130-495-00	MYLAR	0.1µF	5%	50V
C537	1-162-117-00	CERAMIC	100pF	10%	500V
⚠ C539	1-137-150-11	MYLAR	0.01µF	10%	100V
⚠ C540	1-136-203-11	FILM	10000pF	5%	630V
⚠ C541	1-126-963-11	ELECT	4.7µF	20%	50V
⚠ C542	1-126-964-11	ELECT	10µF	20%	50V
C543	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
⚠ C544	1-137-150-11	MYLAR	0.01µF	5%	50V
C545	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
C546	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C547	1-128-740-91	ELECT	1µF	20%	50V
C548	1-130-471-00	MYLAR	0.001µF	5%	50V
C549	1-137-375-11	MYLAR	0.068µF	5%	50V
C550	1-126-935-11	ELECT	470µF	20%	16V
C552	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
⚠ C553	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

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	REF. NO.	PART NO.	DESCRIPTION	VALUES		
⚠	C554	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
⚠	C555	1-130-495-00	MYLAR	0.1µF	5%	50V
⚠	C556	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
	C557	1-128-745-91	ELECT	22µF	20%	50V
⚠	C558	1-126-960-11	ELECT	1µF	20%	50V
⚠	C561	1-163-009-91	CERAMIC CHIP	0.001µF	10%	50V
	C562	1-107-882-91	ELECT	100µF	20%	16V
	C563	1-163-005-91	CERAMIC CHIP	470pF	10%	50V
	C564	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
	C566	1-128-551-11	ELECT	22µF	20%	25V
	C569	1-130-495-00	MYLAR	0.1µF	5%	50V
	C571	1-109-879-11	CERAMIC	22pF	5%	2KV
	C572	1-107-651-11	ELECT	4.7µF	20%	250V
	C573	1-107-649-11	ELECT	2.2µF	20%	250V
	C574	1-137-105-11	MYLAR	0.01µF	10%	250V
	C575	1-135-843-51	ELECT	33µF	20%	200V
	C576	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
	C579	1-109-879-11	CERAMIC	22pF	5%	2KV
	C581	1-107-782-81	CERAMIC	2200pF	1KV	
	C582	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
	C601	1-107-909-11	ELECT	47µF	20%	10V
	C603	1-126-942-61	ELECT	1000µF	20%	25V
⚠	C604	1-104-708-11	FILM	0.47µF	20%	275V
⚠	C605	1-104-706-11	MYLAR	0.22µF	20%	250V
	C608	1-104-653-91	ELECT	220µF	20%	16V
	C609	1-117-699-11	CERAMIC	0.001µF	20%	250V
⚠	C610	1-107-852-11	ELECT(BLOCK)	330µF	20%	400V
	C611	1-163-007-11	CERAMIC CHIP	680pF	10%	50V
⚠	C612	1-119-858-11	FILM	0.068µF	5%	250V
⚠	C613	1-162-132-00	CERAMIC	270pF	10%	2KV
	C614	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C615	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
	C616	1-131-869-91	ELECT	22µF	20%	25V
	C617	1-131-869-91	ELECT	22µF	20%	25V
	C618	1-130-495-00	MYLAR	0.1µF	5%	50V
	C619	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
	C620	1-162-117-00	CERAMIC	100pF	10%	500V
	C621	1-135-842-51	ELECT	47µF	20%	250V
	C622	1-128-763-91	ELECT	100µF	20%	100V
	C624	1-131-868-91	ELECT	3300µF	20%	16V
	C625	1-126-943-11	ELECT	2200µF	20%	25V
	C626	1-104-653-91	ELECT	220µF	20%	16V
	C627	1-126-934-11	ELECT	220µF	20%	10V
	C628	1-128-526-11	ELECT	100µF	20%	25V
	C630	1-127-573-11	CERAMIC CHIP	1µF	10%	16V
	C631	1-113-910-11	CERAMIC	470pF	10%	250V
	C632	1-128-954-11	ELECT	1000µF	20%	25V
	C633	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V

	REF. NO.	PART NO.	DESCRIPTION	VALUES		
	C634	1-163-017-00	CERAMIC CHIP	.0047µF	10%	50V
	C637	1-104-653-91	ELECT	220µF	20%	16V
	C640	1-117-703-11	CERAMIC	.0047µF	20%	250V
	C641	1-107-882-91	ELECT	100µF	20%	16V
⚠	C643	1-117-703-11	CERAMIC	.0047µF	20%	250V
	C647	1-102-228-00	CERAMIC	470pF	10%	500V
	C650	1-163-019-00	CERAMIC CHIP	0.0068µF	10%	50V
	C653	1-163-009-91	CERAMIC CHIP	0.001µF	10%	50V
	C656	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
⚠	C660	1-117-703-11	CERAMIC	.0047µF	20%	250V
	C663	1-107-974-11	CERAMIC	47pF	5%	2KV
	C665	1-216-295-91	SHORT			
	C681	1-107-905-11	ELECT	4.7µF	20%	50V
	C682	1-164-005-11	CERAMIC CHIP	0.47µF		25V
	C701	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
	C702	1-126-963-11	ELECT	4.7µF	20%	50V
	C703	1-136-169-00	FILM	0.22µF	5%	50V
	C704	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
	C706	1-163-247-91	CERAMIC CHIP	68pF	5%	50V
	C707	1-163-247-91	CERAMIC CHIP	68pF	5%	50V
	C708	1-130-495-00	MYLAR	0.1µF	5%	50V
	C709	1-126-941-11	ELECT	470µF	20%	25V
	C710	1-126-941-11	ELECT	470µF	20%	25V
	C711	1-130-495-00	MYLAR	0.1µF	5%	50V
	C712	1-130-495-00	MYLAR	0.1µF	5%	50V
	C713	1-126-933-11	ELECT	100µF	20%	16V
	C714	1-163-131-00	CERAMIC CHIP	390pF	5%	50V
	C715	1-126-933-11	ELECT	100µF	20%	16V
	C716	1-163-989-11	CERAMIC CHIP	0.033µF	10%	25V
	C718	1-163-989-11	CERAMIC CHIP	0.033µF	10%	25V
	C723	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C725	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C729	1-163-003-11	CERAMIC CHIP	330pF	10%	50V
	C733	1-163-003-11	CERAMIC CHIP	330pF	10%	50V
	C901	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C902	1-126-935-11	ELECT	470µF	20%	16V
	C905	1-137-375-11	MYLAR	0.068µF	5%	50V
	C906	1-136-177-00	FILM	1µF	5%	50V
	C908	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C909	1-126-933-11	ELECT	100µF	20%	16V
	C910	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
	C911	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C912	1-126-933-11	ELECT	100µF	20%	16V
	C913	1-130-495-00	MYLAR	0.1µF	5%	50V
	C914	1-163-231-11	CERAMIC CHIP	15pF	5%	50V
	C915	1-163-231-11	CERAMIC CHIP	15pF	5%	50V
	C916	1-126-965-91	ELECT	22µF	20%	50V
	C917	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

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	REF. NO.	PART NO.	DESCRIPTION	VALUES		
	C918	1-126-965-91	ELECT	22µF	20%	50V
	C920	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
	C921	1-126-935-11	ELECT	470µF	20%	16V
	C922	1-107-712-11	ELECT	3.3µF	20%	50V
	C923	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
	C924	1-126-962-11	ELECT	3.3µF	20%	50V
	C925	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C926	1-126-767-11	ELECT	1000µF	20%	16V
	C928	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C929	1-126-963-11	ELECT	4.7µF	20%	50V
	C930	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C931	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
	C933	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
	C935	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
	C936	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
	C938	1-126-933-11	ELECT	100µF	20%	16V
	C939	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
	C940	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
	C941	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
	C942	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C943	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
	C944	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C947	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C949	1-126-933-11	ELECT	100µF	20%	16V
	C950	1-126-933-11	ELECT	100µF	20%	16V
⚠	C951	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C952	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V

CONNECTOR

*	CN501	1-793-239-11	PIN,CONNECTOR (PC BOARD) 6P
*⚠	CN600	1-691-960-11	PIN,CONNECTOR (PC BOARD) 3P
*	CN601	1-580-689-11	PIN,CONNECTOR (PC BOARD) 4P
*	CN602	1-506-371-00	PIN,CONNECTOR 2P
*	CN606	1-564-512-11	PLUG,CONNECTOR 9P
*	CN607	1-564-508-11	PLUG,CONNECTOR 5P
*	CN701	1-764-333-11	PLUG,CONNECTOR 10P
*	CN901	1-508-879-11	BASE POST 4P
*	CN902	1-564-511-11	PLUG,CONNECTOR 8P
*	CN903	1-785-704-21	PIN,CONNECTOR (PC BOARD) 7P
*	CN904	1-564-508-11	PLUG,CONNECTOR 5P

DIODE

	D401	8-719-052-90	DIODE D1NL40-TA
	D402	8-719-921-40	DIODE MTZJ-T-77-4.7B
	D403	8-719-988-61	DIODE 1SS355TE-17
	D404	8-719-050-84	DIODE RB441Q-40T-77
	D501	8-719-110-30	DIODE NNCD12A-T1
	D502	8-719-981-00	DIODE D3S4M
	D503	8-759-157-40	DIODE HZT33-02TE
⚠	D504	8-719-110-30	DIODE NNCD12A-T1
	D505	8-719-063-70	DIODE D1NL20U-TA
	D506	8-719-082-77	DIODE FMQ-G1FSLF681
	D507	8-719-420-90	DIODE MA8051-M-TX
	D508	8-719-988-61	DIODE 1SS355TE-17
	D509	8-719-110-30	DIODE NNCD12A-T1
	D510	8-719-052-90	DIODE D1NL40-TA
	D511	8-719-052-90	DIODE D1NL40-TA
	D512	8-719-911-19	DIODE 1SS119-25TD
⚠	D513	8-719-052-90	DIODE D1NL40-TA
	D514	8-719-970-83	DIODE HSS82-TJ
⚠	D515	8-719-018-82	DIODE ERA34-10TP1
	D516	8-719-052-86	DIODE D2L40-TA
⚠	D517	8-759-157-40	DIODE HZT33-02TE
	D518	8-719-110-30	DIODE NNCD12A-T1
	D519	8-719-109-89	DIODE MTZJ-T-77-5.6B
	D522	8-719-911-19	DIODE 1SS119-25TD
	D523	8-719-911-19	DIODE 1SS119-25TD
	D524	8-719-051-85	DIODE HSS83TD
	D525	8-719-051-85	DIODE HSS83TD
	D527	8-719-420-90	DIODE MA8051-M-TX
	D530	8-719-063-70	DIODE D1NL20U-TA
	D531	8-719-063-70	DIODE D1NL20U-TA
⚠	D601	8-719-510-53	DIODE D4SB60L-F
⚠	D602	8-719-911-19	DIODE 1SS119-25TD
	D603	8-719-911-19	DIODE 1SS119-25TD
	D605	8-719-110-31	DIODE MTZJ-T-77-12B
⚠	D606	8-719-053-19	DIODE µF4007G23
	D607	8-719-053-19	DIODE µF4007G23
	D608	8-719-110-49	DIODE MTZJ-T-77-18
⚠	D609	8-719-911-19	DIODE 1SS119-25TD
	D610	8-719-921-40	DIODE MTZJ-T-77-4.7B
	D611	8-719-067-68	DIODE FMC-26UA
	D612	8-719-053-19	DIODE µF4007G23
	D613	8-719-083-22	DIODE BT149G-112-OT384
	D614	8-719-032-12	DIODE D1NS6-TA2
	D616	8-719-921-40	DIODE MTZJ-T-77-4.7B
	D617	8-719-947-06	DIODE RGP10JPKG23
	D618	8-719-058-38	DIODE FMN-G12S
	D619	8-719-058-38	DIODE FMN-G12S
	D620	8-719-300-76	DIODE RGP10DG23
	D621	8-719-911-19	DIODE 1SS119-25TD
	D622	8-719-058-38	DIODE FMN-G12S
	D623	8-719-110-31	DIODE MTZJ-T-77-12B
	D625	8-719-061-22	DIODE MA8130-M-TX

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D

	REF. NO.	PART NO.	DESCRIPTION	VALUES
	D638	8-719-110-49	DIODE MTZJ-T-77-18	
	D704	8-719-911-19	DIODE 1SS119-25TD	
	D901	8-719-977-03	DIODE MA8056-M-TX	
	D902	8-719-109-89	DIODE MTZJ-T-77-5.6B	
	D903	8-719-050-84	DIODE RB441Q-40T-77	
	D904	8-719-977-03	DIODE MA8056-M-TX	
	D905	8-719-988-61	DIODE 1SS355TE-17	
	D906	8-719-988-61	DIODE 1SS355TE-17	
	D907	8-719-988-61	DIODE 1SS355TE-17	
	D908	8-719-988-61	DIODE 1SS355TE-17	
	D909	8-719-067-40	DIODE AZ23C6V2	
	D911	8-719-062-51	DIODE 1PS226-115	
	D912	8-719-977-03	DIODE MA8056-M-TX	
	D914	8-719-062-51	DIODE 1PS226-115	
	D917	8-719-062-51	DIODE 1PS226-115	
	D918	8-719-977-03	DIODE MA8056-M-TX	
	D919	8-719-977-03	DIODE MA8056-M-TX	
	D920	8-719-050-84	DIODE RB441Q-40T-77	
	D924	8-719-977-03	DIODE MA8056-M-TX	
	D928	8-719-067-40	DIODE AZ23C6V2	
	D929	8-719-067-40	DIODE AZ23C6V2	
	D930	8-719-067-40	DIODE AZ23C6V2	
	D931	8-719-067-40	DIODE AZ23C6V2	
	D936	8-719-977-03	DIODE MA8056-M-TX	
	D937	8-719-977-03	DIODE MA8056-M-TX	
	D943	8-719-801-78	DIODE MA151WK-TX	
		FUSE		
⚠	F601	1-576-232-11	FUSE	(H.B.C.) 5A/250V
		FERRITE BEAD		
	FB502	1-412-911-11	FERRITE	0µH
	FB503	1-412-911-11	FERRITE	0µH
	FB504	1-412-911-11	FERRITE	0µH
	FB506	1-412-911-11	FERRITE	0µH
	FB507	1-412-911-11	FERRITE	0µH
	FB508	1-412-911-11	FERRITE	0µH
	FB601	1-412-911-11	FERRITE	0µH
	FB904	1-543-961-22	FERRITE	0µH
		FUSE HOLDER		
	FH1	1-533-223-11	CLIP, FUSE	
	FH2	1-533-223-11	CLIP, FUSE	
		IC		
	IC401	8-759-593-28	IC LA78040	
⚠	IC501	8-759-570-29	IC UPC6757CS	
	IC502	8-759-803-42	IC LA6500P-FA	
⚠	IC601	8-759-594-75	IC TEA1504/N2	
	IC602	8-759-592-79	IC BA00AST-V5	
⚠	IC603	8-749-019-06	IC K1010HA01	
	IC604	8-759-586-17	IC SPX431LAN-TR	
⚠	IC605	8-759-637-83	IC PQ12RD8S	
⚠	IC607	8-759-450-47	IC BA05T	
	IC608	8-759-231-53	IC L7805CV	
	IC701	8-759-595-52	IC CXA8070AP	
	IC702	8-749-018-54	IC STK391-120	
	IC703	8-759-822-38	IC LA6510	
⚠	IC901	6-800-150-01	IC ST72T751N9B1/ABO	
	IC902	8-759-594-40	IC CXA8071CP	
	IC904	8-759-352-91	IC PST9143NL	
	IC905	8-759-675-64	IC M24C08-MN6T(A)	
	IC906	8-759-675-64	IC M24C08-MN6T(A)	
	IC908	8-759-584-98	IC SN74AHCT04NSR	
		CHIP CONDUCTOR		
	JR001	1-216-295-91	SHORT	
	JR002	1-216-296-11	SHORT	
	JR003	1-216-296-11	SHORT	
	JR006	1-216-296-11	SHORT	
	JR007	1-216-295-91	SHORT	
	JR008	1-216-295-91	SHORT	
	JR009	1-216-295-91	SHORT	
	JR010	1-216-296-11	SHORT	
	JR011	1-216-296-11	SHORT	
	JR012	1-216-296-11	SHORT	
	JR013	1-216-296-11	SHORT	
	JR014	1-216-296-11	SHORT	
	JR021	1-216-296-11	SHORT	
	JR022	1-216-296-11	SHORT	
	JR028	1-216-295-91	SHORT	
	JR031	1-216-296-11	SHORT	
	JR047	1-216-296-11	SHORT	
	JR602	1-216-295-91	SHORT	
		COIL		
⚠	L501	1-406-663-21	INDUCTOR	47µH
⚠	L502	1-406-663-21	INDUCTOR	47µH
	L503	1-419-862-11	INDUCTOR	5µH
	L505	1-414-493-41	INDUCTOR	4.7MH
	L506	1-414-492-25	INDUCTOR	3.9MH
	L508	1-428-942-11	COIL, HORIZONTAL LINEARITY	
	L510	1-419-863-11	COIL, HORIZONTAL CENTER	
	L602	1-400-054-21	INDUCTOR	22µH
	L604	1-406-665-11	INDUCTOR	100µH

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	REF. NO.	PART NO.	DESCRIPTION	VALUES
	L606	1-406-665-11	INDUCTOR	100µH
	L901	1-414-857-11	INDUCTOR	100µH
	L902	1-414-857-11	INDUCTOR	100µH
		FILTER		
⚠	LF602	1-429-180-11	TRANSFORMER, LINE FILTER	
		IC LINK		
⚠	PS501	1-532-605-00	LINK,	IC 0.4A/150V
		TRANSISTOR		
	Q501	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
	Q502	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
⚠	Q503	8-729-035-54	TRANSISTOR 2SJ449(1)	
	Q504	8-729-031-89	TRANSISTOR 2SC3941A-QR(TA)	
	Q505	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
	Q507	8-729-055-02	TRANSISTOR 2SC5681-CA	
	Q508	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
⚠	Q510	8-729-046-60	TRANSISTOR STP4NB80FP(025Y)	
	Q511	8-729-043-53	TRANSISTOR STD5NE10-1	
	Q512	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
	Q513	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
	Q514	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
	Q519	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA	
	Q520	8-729-035-54	TRANSISTOR 2SJ449(1)	
	Q521	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
	Q522	8-729-027-23	TRANSISTOR DTA114EKA-T146	
	Q524	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
	Q525	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
	Q601	8-729-029-92	TRANSISTOR DTC143ESA-TP	
⚠	Q602	8-729-048-61	TRANSISTOR 2SK2843LBS2SONY	
	Q603	8-729-900-53	TRANSISTOR DTC114EKA-T146	
	Q604	8-729-119-78	TRANSISTOR 2SC3311A-RTA	
	Q605	8-729-900-53	TRANSISTOR DTC114EKA-T146	
	Q612	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA	
	Q901	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
	Q903	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
		RESISTOR		
	R401	1-249-383-11	CARBON	1.5 5% 1/4W
	R402	1-215-866-11	METAL OXIDE	330 5% 1W
	R403	1-214-661-21	METAL	1.5 1% 1/4W
	R404	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W
	R405	1-214-661-21	METAL	1.5 1% 1/4W
	R406	1-216-677-11	METAL CHIP	12K 0.50% 1/10W
	R407	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
	R408	1-216-073-91	RES-CHIP	10K 5% 1/10W

	REF. NO.	PART NO.	DESCRIPTION	VALUES
	R409	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W
	R410	1-216-677-11	METAL CHIP	12K 0.50% 1/10W
	R413	1-216-369-00	METAL OXIDE	1 5% 2W
	R501	1-247-807-31	CARBON	100 5% 1/4W
	R502	1-218-759-11	METAL CHIP	200K 0.50% 1/10W
	R503	1-216-675-91	METAL CHIP	10K 0.50% 1/10W
	R504	1-249-377-11	CARBON	0.47 5% 1/4W
	R505	1-216-073-91	RES-CHIP	10K 5% 1/10W
	R506	1-215-481-00	METAL	330K 1% 1/4W
	R507	1-215-431-00	METAL	2.7K 1% 1/4W
	R508	1-247-807-31	CARBON	100 5% 1/4W
	R509	1-249-433-11	CARBON	22K 5% 1/4W
⚠	R510	1-215-444-00	METAL	9.1K 1% 1/4W
⚠	R511	1-249-381-11	CARBON	1 5% 1/4W
	R512	1-249-389-11	CARBON	4.7 5% 1/4W
	R513	1-215-888-00	METAL OXIDE	220 5% 2W
	R514	1-215-387-00	METAL	39 1% 1/4W
	R515	1-249-417-11	CARBON	1K 5% 1/4W
	R516	1-214-844-81	METAL	150 1% 1/2W
	R517	1-216-394-00	METAL OXIDE	2.7 5% 3W
	R518	1-216-394-00	METAL OXIDE	2.7 5% 3W
	R519	1-247-903-00	CARBON	1M 5% 1/4W
⚠	R520	1-249-405-11	CARBON	100 5% 1/4W
	R521	1-249-417-11	CARBON	1K 5% 1/4W
	R522	1-249-401-11	CARBON	47 5% 1/4W
	R523	1-215-463-00	METAL	56K 1% 1/4W
	R524	1-215-463-00	METAL	56K 1% 1/4W
	R525	1-249-417-11	CARBON	1K 5% 1/4W
	R526	1-216-450-00	METAL OXIDE	82 5% 2W
⚠	R527	1-249-429-11	CARBON	10K 5% 1/4W
	R528	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
	R529	1-216-450-00	METAL OXIDE	82 5% 2W
⚠	R530	1-216-474-11	METAL OXIDE	82 5% 3W
⚠	R531	1-216-474-11	METAL OXIDE	82 5% 3W
⚠	R532	1-249-385-11	CARBON	2.2 5% 1/4W
	R533	1-249-417-11	CARBON	1K 5% 1/4W
	R534	1-249-405-11	CARBON	100 5% 1/4W
	R536	1-249-417-11	CARBON	1K 5% 1/4W
	R538	1-219-746-11	CARBON	1K 5% 1/2W
	R539	1-215-445-00	METAL	10K 1% 1/4W
⚠	R540	1-215-476-00	METAL	200K 1% 1/4W
⚠	R541	1-215-421-00	METAL	1K 1% 1/4W
⚠	R542	1-215-421-00	METAL	1K 1% 1/4W
⚠	R543	1-249-389-11	CARBON	4.7 5% 1/4W
⚠	R544	1-247-889-00	CARBON	270K 5% 1/4W
⚠	R545	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
⚠	R546	1-215-457-00	METAL	33K 1% 1/4W

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	REF. NO.	PART NO.	DESCRIPTION	VALUES		
⚠	R547	1-215-477-00	METAL	220K	1%	1/4W
⚠	R548	1-215-423-00	METAL	1.2K	1%	1/4W
⚠	R549	1-215-464-00	METAL	62K	1%	1/4W
⚠	R550	1-215-423-00	METAL	1.2K	1%	1/4W
	R551	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
⚠	R552	1-215-463-00	METAL	56K	1%	1/4W
	R553	1-216-698-11	METAL CHIP	91K	0.50%	1/10W
	R554	1-218-756-11	METAL CHIP	150K	0.50%	1/10W
	R556	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
	R557	1-216-079-00	RES-CHIP	18K	5%	1/10W
	R558	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
	R559	1-215-431-00	METAL	2.7K	1%	1/4W
	R560	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
⚠	R561	1-216-474-11	METAL OXIDE	82	5%	3W
	R562	1-215-451-00	METAL	18K	1%	1/4W
	R563	1-249-383-11	CARBON	1.5	5%	1/4W
⚠	R564	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
	R565	1-215-481-00	METAL	330K	1%	1/4W
	R566	1-215-859-00	METAL OXIDE	22	5%	1W
⚠	R567	1-216-073-91	RES-CHIP	10K	5%	1/10W
⚠	R568	1-249-437-11	CARBON	47K	5%	1/4W
	R569	1-216-643-11	METAL CHIP	470	0.50%	1/10W
	R570	1-219-749-91	CARBON	10K	5%	1/2W
	R571	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
	R572	1-260-288-11	CARBON	0.47	5%	1/2W
⚠	R574	1-249-421-11	CARBON	2.2K	5%	1/4W
	R575	1-260-316-51	CARBON	100	5%	1/2W
	R577	1-215-911-11	METAL OXIDE	100	5%	3W
	R578	1-260-315-71	CARBON	82	5%	1/2W
	R581	1-249-429-11	CARBON	10K	5%	1/4W
	R582	1-249-399-11	CARBON	33	5%	1/4W
	R583	1-216-073-91	RES-CHIP	10K	5%	1/10W
	R584	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
	R585	1-249-417-11	CARBON	1K	5%	1/4W
	R586	1-249-421-11	CARBON	2.2K	5%	1/4W
	R587	1-216-049-11	RES-CHIP	1K	5%	1/10W
	R589	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
	R590	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
	R591	1-214-844-81	METAL	150	1%	1/2W
	R592	1-214-844-81	METAL	150	1%	1/2W
	R594	1-216-033-00	RES-CHIP	220	5%	1/10W
⚠	R595	1-215-477-00	METAL	220K	1%	1/4W
⚠	R596	1-215-423-00	METAL	1.2K	1%	1/4W
	R597	1-259-880-11	CARBON	2.2M	5%	1/4W
	R599	1-216-049-11	RES-CHIP	1K	5%	1/10W
⚠	R600	1-205-998-11	CEMENTED	1	5%	10W
	R602	1-219-513-11	CARBON	4.7M	5%	1/2W

	REF. NO.	PART NO.	DESCRIPTION	VALUES		
	R603	1-249-420-11	CARBON	1.8K	5%	1/4W
⚠	R604	1-219-754-11	CARBON	680K	5%	1/2W
	R606	1-218-768-11	METAL CHIP	470K	0.50%	1/10W
	R607	1-216-081-00	RES-CHIP	22K	5%	1/10W
	R608	1-215-473-00	METAL	150K	1%	1/4W
	R609	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
	R610	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
	R611	1-216-009-91	RES-CHIP	22	5%	1/10W
	R612	1-247-791-91	CARBON	22	5%	1/4W
⚠	R613	1-219-513-11	CARBON	4.7M	5%	1/2W
	R614	1-216-345-11	METAL OXIDE	0.47	5%	1W
	R615	1-216-117-00	RES-CHIP	680K	5%	1/10W
	R616	1-216-121-11	RES-CHIP	1M	5%	1/10W
	R617	1-216-025-11	RES-CHIP	100	5%	1/10W
	R618	1-216-635-11	METAL CHIP	220	0.50%	1/10W
	R619	1-215-893-11	METAL OXIDE	1.5K	5%	2W
	R620	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
	R621	1-216-094-00	RES-CHIP	75K	5%	1/10W
	R622	1-216-009-91	RES-CHIP	22	5%	1/10W
	R623	1-216-615-91	METAL CHIP	33	0.50%	1/10W
	R624	1-216-611-11	METAL CHIP	22	0.50%	1/10W
	R625	1-260-332-51	CARBON	2.2K	5%	1/2W
	R626	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
⚠	R627	1-260-288-11	CARBON	0.47	5%	1/2W
	R628	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W
	R633	1-249-429-11	CARBON	10K	5%	1/4W
	R635	1-215-925-11	METAL OXIDE	22K	5%	3W
	R636	1-215-879-11	METAL OXIDE	47K	5%	1W
	R640	1-249-381-11	CARBON	1	5%	1/4W
	R642	1-216-641-11	METAL CHIP	390	0.50%	1/10W
	R643	1-216-697-91	METAL CHIP	82K	0.50%	1/10W
	R647	1-216-073-91	RES-CHIP	10K	5%	1/10W
	R648	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W
	R649	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
	R650	1-215-471-00	METAL	120K	1%	1/4W
	R654	1-216-344-00	METAL OXIDE	0.39	5%	1W
	R655	1-247-807-31	CARBON	100	5%	1/4W
	R656	1-215-893-11	METAL OXIDE	1.5K	5%	2W
	R660	1-215-879-11	METAL OXIDE	47K	5%	1W
	R665	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
	R667	1-215-911-11	METAL OXIDE	100	5%	3W
	R693	1-249-413-11	CARBON	470	5%	1/4W
	R697	1-216-350-11	METAL OXIDE	1.2	5%	1W
	R698	1-216-091-00	RES-CHIP	56K	5%	1/10W
	R699	1-215-865-11	METAL OXIDE	220	5%	1W
	R703	1-249-410-11	CARBON	270	5%	1/4W
	R704	1-215-449-00	METAL	15K	1%	1/4W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

A component identified by this ⋈ symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

D

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R705	1-215-449-00	METAL	15K	1%	1/4W
R706	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R707	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R708	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R709	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R710	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R711	1-216-346-00	METAL OXIDE	0.56	5%	1W
R712	1-215-860-11	METAL OXIDE	33	5%	1W
R713	1-216-347-11	METAL OXIDE	0.68	5%	1W
R716	1-215-860-11	METAL OXIDE	33	5%	1W
R717	1-216-353-00	METAL OXIDE	2.2	5%	1W
R718	1-215-863-11	METAL OXIDE	100	5%	1W
R719	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R720	1-216-295-91	SHORT			
R721	1-216-011-00	RES-CHIP	27	5%	1/10W
R724	1-215-859-00	METAL OXIDE	22	5%	1W
R727	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R728	1-215-863-11	METAL OXIDE	100	5%	1W
R729	1-216-353-00	METAL OXIDE	2.2	5%	1W
R730	1-215-857-71	METAL OXIDE	10	5%	1W
R731	1-216-295-91	SHORT			
R733	1-216-295-91	SHORT			
R735	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R737	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R739	1-216-073-91	RES-CHIP	10K	5%	1/10W
⚠ R741	1-249-380-11	CARBON	0.82	5%	1/4W
⚠ R743	1-249-380-11	CARBON	0.82	5%	1/4W
R745	1-216-298-00	RES-CHIP	2.2	5%	1/10W
R747	1-216-298-00	RES-CHIP	2.2	5%	1/10W
R753	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R755	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R902	1-216-295-91	SHORT			
R903	1-216-049-11	RES-CHIP	1K	5%	1/10W
R904	1-216-049-11	RES-CHIP	1K	5%	1/10W
R905	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R906	1-216-073-91	RES-CHIP	10K	5%	1/10W
R907	1-260-316-51	CARBON	100	5%	1/2W
R908	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R909	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R910	1-249-411-11	CARBON	330	5%	1/4W
R911	1-249-418-11	CARBON	1.2K	5%	1/4W
R912	1-249-417-11	CARBON	1K	5%	1/4W
R913	1-249-401-11	CARBON	47	5%	1/4W
R914	1-249-401-11	CARBON	47	5%	1/4W
R915	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R916	1-216-077-91	RES-CHIP	15K	5%	1/10W
R917	1-216-077-91	RES-CHIP	15K	5%	1/10W
R918	1-249-417-11	CARBON	1K	5%	1/4W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R919	1-216-073-91	RES-CHIP	10K	5%	1/10W
R920	1-249-421-11	CARBON	2.2K	5%	1/4W
R924	1-216-041-00	RES-CHIP	470	5%	1/10W
R925	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R926	1-216-295-91	SHORT			
R929	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R931	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R933	1-249-417-11	CARBON	1K	5%	1/4W
⚠ R934	1-249-429-11	CARBON	10K	5%	1/4W
R935	1-247-807-31	CARBON	100	5%	1/4W
R936	1-247-807-31	CARBON	100	5%	1/4W
R937	1-247-807-31	CARBON	100	5%	1/4W
R938	1-216-025-11	RES-CHIP	100	5%	1/10W
R939	1-216-073-91	RES-CHIP	10K	5%	1/10W
R940	1-216-089-91	RES-CHIP	47K	5%	1/10W
R950	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R951	1-216-025-11	RES-CHIP	100	5%	1/10W
R957	1-249-401-11	CARBON	47	5%	1/4W
R958	1-249-401-11	CARBON	47	5%	1/4W
R969	1-247-807-31	CARBON	100	5%	1/4W
R971	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R972	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R973	1-216-049-11	RES-CHIP	1K	5%	1/10W
R981	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R982	1-249-413-11	CARBON	470	5%	1/4W
R983	1-216-025-11	RES-CHIP	100	5%	1/10W
R984	1-216-089-91	RES-CHIP	47K	5%	1/10W
R985	1-216-093-91	RES-CHIP	68K	5%	1/10W

VARIABLE RESISTOR

⋈⚠ RV501	1-241-767-21	RES, ADJ, CERMET	100K	
RV502	1-227-387-11	RES, VAR	100	

RELAY

⚠ RY601	1-755-067-21	RELAY	

SPARK GAP

⚠ SG501	1-519-422-11	GAP, SPARK	
SG601	1-533-982-21	GAP, SPARK	

TRANSFORMER

⚠ T501	1-453-365-11	FBT ASSY NX-4405/VQ	
T503	1-435-975-11	TRANSFORMER, FERRITE (DFT)	
T504	1-433-978-11	TRANSFORMER, HORIZONTAL DRIVE	
T505	1-435-766-11	TRANSFORMER, FERRITE	(HST)
T506	1-435-765-31	TRANSFORMER, FERRITE	(LCT)
⚠ T601	1-435-768-11	TRANSFORMER, CONVERTER	(SRT)

D J H1

	REF. NO.	PART NO.	DESCRIPTION	VALUES
		THERMISTOR		
⚠	TH600	1-803-339-11	THERMISTOR, NTC	
	TH601	1-803-540-11	THERMISTOR, PTC	
		VARISTOR		
⚠	VA601	1-801-073-31	VARISTOR	TNR14V471K660
		CRYSTAL		
	X901	1-767-826-21	VIBRATOR, CRYSTAL	
	X902	1-767-933-11	OSCILLATOR, CERAMIC	
	J			
		***A-1400-274-A**	**J BOARD, MOUNTED**	
		CONNECTOR		
*	CN1001	1-564-508-11	PLUG,CONNECTOR	5P
		SWITCH		
	S1001	1-554-472-00	SWITCH PUSH (1 KEY)	

	REF. NO.	PART NO.	DESCRIPTION	VALUES		
	H1					
		***A-1400-275-A**	**H1 BOARD, MOUNTED**			
		CAPACITOR				
	C801	1-130-495-00	MYLAR	0.1µF	5%	50V
	C802	1-102-074-00	CERAMIC	0.001µF	10%	50V
		CONNECTOR				
*	CN801	1-564-520-11	PLUG,CONNECTOR	5P		
		DIODE				
	D801	8-719-911-19	DIODE 1SS119-25TD			
	D802	8-719-911-19	DIODE 1SS119-25TD			
	D803	8-719-911-19	DIODE 1SS119-25TD			
	D804	8-719-911-19	DIODE 1SS119-25TD			
	D810	8-719-081-89	DIODE SML76755WNTP15			
		RESISTOR				
	R801	1-249-422-11	RES, SMALL TYPE CARBON	2.7K		
	R802	1-243-758-91	CARBON	470	5%	1/4W
	R803	1-249-414-11	CARBON	560	5%	1/4W
	R804	1-243-762-91	CARBON	1K	5%	1/4W
	R805	1-249-419-11	CARBON	1.5K	5%	1/4W
	R806	1-247-843-11	CARBON	3.3K	5%	1/4W
		SWITCH				
	S801	1-771-734-11	SWITCH TACTILE			

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Sony Technology Center
Technical Services
Service Promotion Department

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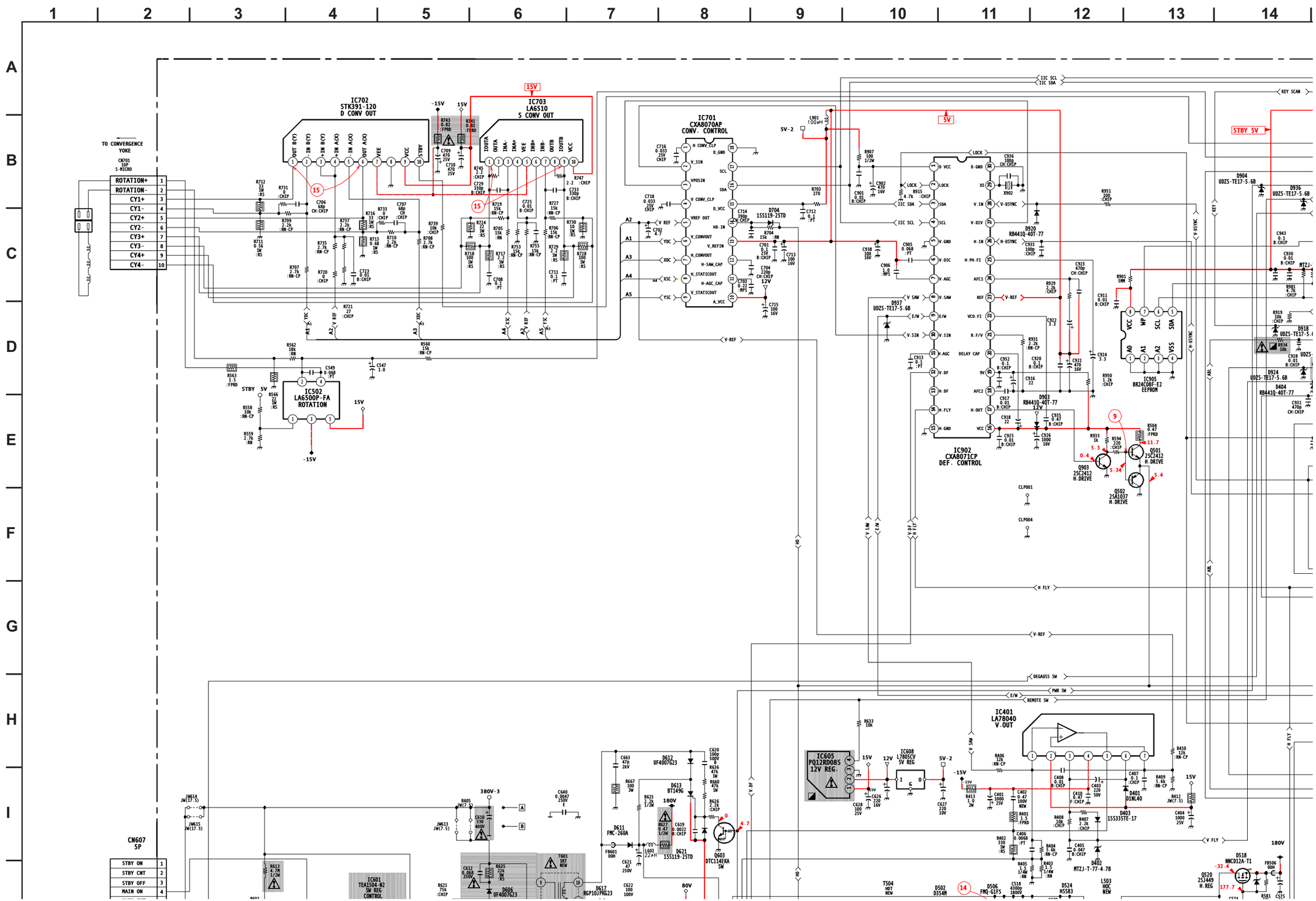
9-978-884-01

D BOARD - SCHEMATIC DIAGRAM



15 | 16 | 17 | 18 | 19 | 20 | 21 | 22

TO H1 BOARD
CN801
CN904
5P

5	STBY 5V
4	GND
3	KEY
2	LED RED
1	LED GRN

CN901
4P
WHT
:S-MICRO

1	D GND
2	STBY 5V
3	RXD
4	TXD

CN902
8P

1	H RTRC
2	V RTRC
3	CBLK
4	BPCLP
5	IIC SCL
6	GND
7	IIC SDA
8	CSYNC

TO A BOARD
CN309

CN903
7P

1	HOST GND1
2	DDC SDA1
3	DDC SCL1
4	HOST 5V /STBY 5V
5	GND
6	HSYNC
7	VSYNC

CONNECTOR
15PIN D-SUB
SIGNAL IN

IC904
PST9143NL
RESET

IC901
MASK ROM

IC908
TC74HCT04AF
SYNC INVERTER

IC906
M24C08-MN6T
EEPROM

IC501
AP6727CS
PWR UNIT

Q901 2SA1037
Q522 DTA114EKA SYNC LOCK
Q524 2SA1037 SYNC LOCK
Q503 2SJ449 HV REG

D902 MTZJ-T-77-5.6B
D907 1SS355TE-17
D905 1SS355TE-17
D906 1SS355TE-17
D908 1SS355TE-17
D507 UDZS-TE17-5.1B
D901 UDZS-TE17-5.6B
D914 1PS226-115
D911 1PS226-115
D917 1PS226-115
D522 1SS119-25TD
D509 NNCD12A-T1
D931 AZ23C6V2
D930 AZ23C6V2
D929 AZ23C6V2
D928 AZ23C6V2
D909 AZ23C6V2
D912

STBY 5V
5V-2
12V
180V
SCAN
IIC SCL
IIC SDA
RXD
TXD
CBLK
H RTRC
V RTRC
H-SYNC
V-SYNC
CSYNC
BPCLAMP
H FLY
V RETRC
HD
E/W
LOCK
HV

DCONV SW
ROTATION
HLIN
POWER SW
REMOTE SW
DEGAUSS SW
INPUT SEL
KEY
V FLY
V-SYNC
BPCLAMP
LOCK
H-USYNC
C-SYNC
EEP SDA
EEP SCL
RESET
LED RED
LED GREEN
S0
S1
S2
S3
S4

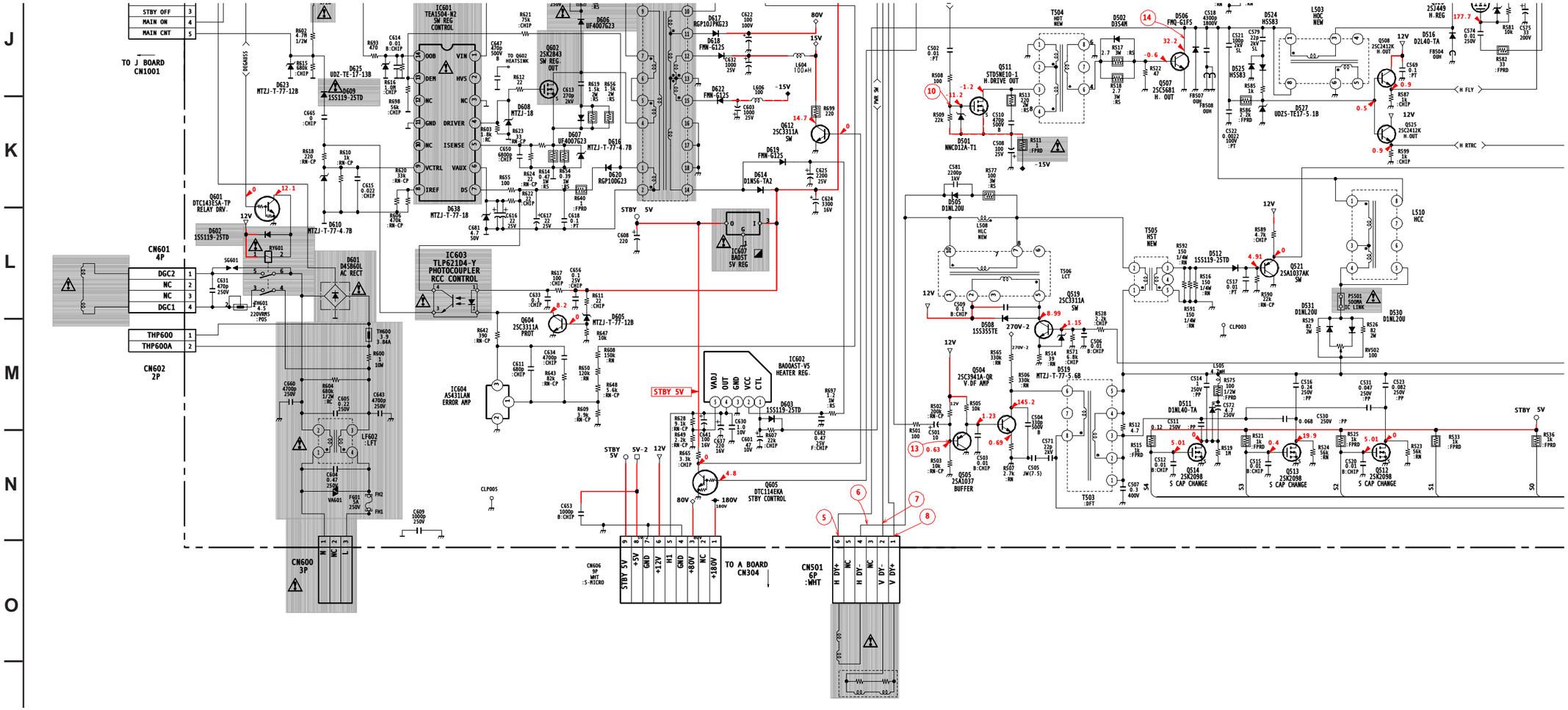
X901 24MHz
C914 15pF CH:CHIP
C915 15pF CH:CHIP
FB904
FB902 JW(5)
FB503 00H
L513 JW(5)
L507 JW(5)
JW904 JW(5)
JR602 0 :CHIP
C912 100 16V
C910 0.1 B:CHIP
C929 4.7 50V
C908 0.01 B:CHIP
C909 100 16V
C947 0.01 B:CHIP
C949 100 16V
C944 0.01 B:CHIP
C942 0.01 B:CHIP
C950 100 16V
C939 1000 CH:CHIP
C931 470P :CHIP
C940 47p CH:CHIP
C941 47p CH:CHIP
C543 1000 CH:CHIP
C564 0.47 B:CHIP
C550 470 16V
C576 47p CH:CHIP
C545 0.022 B:CHIP
C546 2200 CH:CHIP
C566 22 25V
C562 100 16V
C582 0.022 B:CHIP
C552 0.01 B:CHIP
C557 18k :CHIP
C548 0.001 :PT
C563 470p B:CHIP
C553 22000 B:CHIP
C555 0.1 :PT
C558 1
C554 0.1 25V B:CHIP
C561 0.001 B:CHIP
C526 3300p

R905 4.7k :CHIP
R925 4.7k :CHIP
R926 0 :CHIP
R910 330
R911 1.2k
R909 2.2k :CHIP
R908 2.2k :CHIP
R969 100
R906 10k
R912 1k
R973 1k :CHIP
R903 1k :CHIP
R920 2.2k
R923 JW(5)
R918 1k
R924 470 :CHIP
R504 1k :CHIP
R914 47
R935 100
R913 47
R982 470
R985 68k :CHIP
R983 100 :CHIP
R984 47k :CHIP
R916 15k :CHIP
R917 15k :CHIP
R939 10k :CHIP
R940 47k :CHIP
R957 47
R958 47
R937 100
R936 100 :CHIP
R938 100
R971 2.2k :CHIP
R972 2.2k :CHIP
R554 150k :RN-CP
R556 47k :RN-CP
R564 33k :RN-CP
R567 10k
R569 470 :RN-CP
R552 33k :RN-CP
R553 91k :RN-CP
R557 18k :CHIP
R561 82 3W :RS
R530 82 3W :RS
R583 10k

C910 0.1 B:CHIP
C908 0.01 B:CHIP
C914 CH:CHIP
C915 CH:CHIP
C939 1000 CH:CHIP
C940 47p CH:CHIP
C941 47p CH:CHIP
C947 0.01 B:CHIP
C949 100 16V
C944 0.01 B:CHIP
C942 0.01 B:CHIP
C950 100 16V
C543 1000 CH:CHIP
C564 0.47 B:CHIP
C550 470 16V
C576 47p CH:CHIP
C545 0.022 B:CHIP
C546 2200 CH:CHIP
C566 22 25V
C562 100 16V
C582 0.022 B:CHIP
C552 0.01 B:CHIP
C557 18k :CHIP
C548 0.001 :PT
C563 470p B:CHIP
C553 22000 B:CHIP
C555 0.1 :PT
C558 1
C554 0.1 25V B:CHIP
C561 0.001 B:CHIP
C526 3300p

R905 4.7k :CHIP
R925 4.7k :CHIP
R926 0 :CHIP
R910 330
R911 1.2k
R909 2.2k :CHIP
R908 2.2k :CHIP
R969 100
R906 10k
R912 1k
R973 1k :CHIP
R903 1k :CHIP
R920 2.2k
R923 JW(5)
R918 1k
R924 470 :CHIP
R504 1k :CHIP
R914 47
R935 100
R913 47
R982 470
R985 68k :CHIP
R983 100 :CHIP
R984 47k :CHIP
R916 15k :CHIP
R917 15k :CHIP
R939 10k :CHIP
R940 47k :CHIP
R957 47
R958 47
R937 100
R936 100 :CHIP
R938 100
R971 2.2k :CHIP
R972 2.2k :CHIP
R554 150k :RN-CP
R556 47k :RN-CP
R564 33k :RN-CP
R567 10k
R569 470 :RN-CP
R552 33k :RN-CP
R553 91k :RN-CP
R557 18k :CHIP
R561 82 3W :RS
R530 82 3W :RS
R583 10k

5.75
4.86
6.28
53.2


STBY OFF 3
MAIN ON 4
MAIN CNT 5
TO J BOARD CN1001
CN601 4P
DGC2 1
NC 2
NC 3
DGC1 4
THP600 1
THP600A 2
CN602 2P
CN600 3P
N 1
NC 2
L 3
IC601 TEA1504-N2 SW REG CONTROL
OOB VIN
DEM HVS
NC NC
GND DRIVER
NC ISENSE
VCTRL VAUX
IREF DS
IC603 TLP621D4-Y PHOTOCOUPLER RCC CONTROL
IC604 AS431LAN ERROR AMP
IC607 BA05T 5V REG
IC602 BA00AST-V5 HEATER REG.
VADJ OUT GND VCC CTL
Q601 DTC143ESA-TP RELAY DRV.
Q602 2SK2843 SW REG. OUT
Q604 2SC3311A PROT
Q605 DTC114EKA STBY CONTROL
Q612 2SC3311A SW
Q619 2SC3311A SW
Q501 STD5NE10-1 H.DRIVE OUT
Q504 2SC3941A-QR V-DF AMP
Q505 2SA1037 BUFFER
Q507 2SC5681 H. OUT
Q508 2SC2412K H.OUT
Q525 2SC2412K H.OUT
Q514 2SK2098 S CAP CHANGE
Q513 2SK2098 S CAP CHANGE
Q512 2SK2098 S CAP CHANGE
Q521 2SA1037AK SW
D501 NMC012A-T1
D502 D354M
D506 FMQ-G1FS
D524 HS583
D527 UDZS-TE17-5.1B
D516 D2L40-TA
D625 UDZ-TE-17-13B
D606 UF4007G23
D607 UF4007G23
D608 MTZJ-18
D609 1SS119-25TD
D610 MTZJ-T-77-4.7B
D616 MTZJ-T-77-4.7B
D617 RGP10J/PKG23
D618 FMN-G12S
D622 FMN-G12S
D619 FMN-G12S
D620 RGP10DG23
D638 MTZJ-T-77-18
D602 1SS119-25TD
D601 D4SB60L AC RECT
D605 MTZJ-T-77-12B
D603 1SS119-25TD
D502 1SS119-25TD
D505 D1NL20U
D508 1SS355TE
D511 D1NL40-TA
D512 1SS119-25TD
D531 D1NL20U
D530 D1NL20U
D519 MTZJ-T-77-5.6B
T504 HDT NEW
T505 HST NEW
T506 LCT
T503 :DFT
L503 HOC NEW
L510 HCC
L508 NEW
L509 2.2uH
LF602 :LFT
VA601
F601 5A 250V
FH1
FH2
RY601 4.5 220VDRS :MOS
RY601
SG601
TH600 3.9 3.0AA
PS501 500MA :IC LINK
RVS02 100
CLP005
CLP003
CN606 6P WHT :S-MICRO
STBY 5V
+5V
GND
+12V
H1
GND
+80V
NC
+180V
TO A BOARD CN304
CN501 6P :WHT
H DY+
NC
H DY-
NC
V DY-
V DY+
STBY 5V
5V-2
12V
80V
180V
-15V
H FLY
H RTRC
S1
S2
S3
S4
S0
0.63
0.69
1.23
145.2
4.8
8.2
8.99
1.15
4.91
19.9
5.01
0.4
0.9
177.7
32.2
-0.6
-1.2
-11.2
14.7
12.1

180V
D509
NNCD12A-T1
Q503
2SJ449
HV REG
53.2
R572
0.47
1/2W
:FPRD
R527
10K
C524
33
200V
C527
0.01
250V
128.1
D513
D1NL40
FR502
0UH
R534
100
:FPRD
R531
82
3W
:RS
C536
2200p
500V
L501
47uH
L502
47uH
R520
100
:FPRD
Q510
STP4NB80FP
HV OUT
178.1
53.2
C519
2200P
2kV
:PF
D504
NNCD12A-T1
R574
2.2k
11
12
270V-2
R552
56k
:RN
D517
HZT33-02TE
R595
220k
:RN
R547
220k
:RN
R543
4.7
:FPRD
D515
ERA34-10TP1
C544
0.01
:PF
R549
62k
:RN
C540
0.01
630V
R510
9.1k
:RN
C542
10
50V
C537
100p
500V
D510
D1NL40-TA
R532
2.2
:FPRD
C533
1.0
50V
R539
10k
:RN
D503
HZT33-02TE
C528
0.01
200V
:PF
R570
10k
1/2W
:SURGE
R538
1k
1/2W
:SURGE
C576
47p
CH:CHIP
R583
10K
R584
4.7k
:CHIP
C564
0.47
B:CHIP
C550
470
16V
L507
JW(5)
T501
80V
:FBT
C534
0.033
100V
R597
2.2M
C532
0.22
100V
R542
1k
:RN
R541
1k
:RN
R540
200k
:RN
RV501
100K
R568
47k
R544
270k
C539
0.01
100V
C556
220p
CH:CHIP
SG501
C535
0.1
:PF
R545
47k
RH:CP
R546
33k
:RN
C543
4.7
D514
HS5B2
R548
1.2k
:RN
R550
1.2k
:RN
R549
1.2k
:RN
12V
L506
3.9mH
R578
82
1/2W
:RS
C573
2.2
250V
5V
R536
1k
:FPRD
CN510
-33V
TO A BOARD
CN306
D (POWER)
(CONVERGENCE)
9-978-884-01<17VC>DBOARD

SONY

4-086-970-**12** (1)

Trinitron® Color Computer Display

Operating Instructions **US**

Mode d'emploi **FR**

Manual de instrucciones **ES**

HMD-A240
HMD-A440

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Owner's Record

The model and serial numbers are located at the rear of the unit. Record these numbers in the spaces provided below. Refer to them whenever you call upon your dealer regarding this product.
Model No._____ Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.

FCC Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

FABRICANTE:

Sony de Tijuana Este S.A. de C.V.
Laguna Mainar No. 5520, Seccion C
Parque Industrial El Lago
Tijuana, B.C. Mexico C.P. 22570
Tel. (6) 625-32-16, RFC STE-961001-959

DISTRIBUIDOR O IMPORTADOR:

Sony de Mexico, S.A. de C.V.
Henry Ford No. 29
Fraccionamiento Industrial San Nicolas
Tlalnepantla, Estado de Mexico C.P. 54030
Tel. (5) 321-10-00, RFC SEM-941001-BJA

IMPORTANTE

Para prevenir cualquier mal funcionamiento y evitar daños, por favor, lea detalladamente este manual de instrucciones antes de conectar y operar este equipo.

INFORMATION
This product complies with Swedish National Council for Metrology (MPR) standards issued in December 1990 (MPR II) for very low frequency (VLF) and extremely low frequency (ELF).

INFORMATION
Ce produit est conforme aux normes du Swedish National Council for Metrology de décembre 1990 (MPR II) en ce qui concerne les fréquences très basses (VLF) et extrêmement basses (ELF).

INFORMACIÓN
Este producto cumple las normas del Consejo Nacional Sueco para Metrología (MPR) emitidas en diciembre de 1990 (MPR II) para frecuencias muy bajas (VLF) y frecuencias extremadamente bajas (ELF).

NOTICE

This notice is applicable for USA/Canada only.
If shipped to USA/Canada, install only a UL LISTED/CSA LABELLED power supply cord meeting the following specifications:
SPECIFICATIONS

Plug Type	Nema-Plug 5-15p
Cord	Type SVT or SJT, minimum 3 × 18 AWG
Length	Maximum 15 feet
Rating	Minimum 7 A, 125 V

NOTICE

Cette notice s'applique aux Etats-Unis et au Canada uniquement.
Si cet appareil est exporté aux Etats-Unis ou au Canada, utiliser le cordon d'alimentation portant la mention UL LISTED/CSA LABELLED et remplissant les conditions suivantes:
SPECIFICATIONS

Type de fiche	Fiche Nema 5-15 broches
Cordon	Type SVT ou SJT, minimum 3 × 18 AWG
Longueur	Maximum 15 pieds
Tension	Minimum 7 A, 125 V

As an ENERGY STAR Partner, Sony Corporation has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

For questions regarding your product or for the Sony Service Center nearest you call:

1-800-222-SONY(7669)

or write to:
Sony Customer Information Center
1 Sony Drive, Mail Drop #T1-11, Park Ridge, NJ 07656 USA

The number below is for FCC related matters only.

Declaration of Conformity

Trade Name:	Sony
Model No.:	HMD-A240 and HMD-A440
Responsible Party:	Sony Electronics Inc.
Address:	680 Kinderkamack Road, Oradell, NJ 07649 USA
Telephone No.:	201-930-6972

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Table of Contents

Precautions 3
Setup 4
Adjustments 4
Technical Features 6
Troubleshooting 6
Specifications 8
Appendix i
Preset mode timing table i

- Trinitron® and FD Trinitron® are registered trademarks of Sony Corporation.
- Macintosh is a trademark licensed to Apple Computer, Inc., registered in the U.S.A. and other countries.
- Windows® and MS-DOS are registered trademarks of Microsoft Corporation in the United States and other countries.
- IBM PC/AT and VGA are registered trademarks of IBM Corporation of the U.S.A.
- VESA and DDC™ are trademarks of the Video Electronics Standard Association.
- ENERGY STAR is a U.S. registered mark.
- All other product names mentioned herein may be the trademarks or registered trademarks of their respective companies.
- Furthermore, "™" and "®" are not mentioned in each case in this manual.

Precautions

Warning on power connections

- Use the supplied power cord.
- Before disconnecting the power cord, wait at least 30 seconds after turning off the power to allow the static electricity on the screen's surface to discharge.
- After the power is turned on, the screen is demagnetized (degaussed) for about 5 seconds. This generates a strong magnetic field around the screen which may affect data stored on magnetic tapes and disks placed near the monitor. Be sure to keep magnetic recording equipment, tapes, and disks away from the monitor.

The equipment should be installed near an easily accessible outlet.

Installation

Do not install the monitor in the following places:

- on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies, etc.) that may block the ventilation holes
- near heat sources such as radiators or air ducts, or in a place subject to direct sunlight
- in a place subject to severe temperature changes
- in a place subject to mechanical vibration or shock
- on an unstable surface
- near equipment which generates magnetism, such as a transformer or high voltage power lines
- near or on an electrically charged metal surface
- in a dusty or smoky environment
- inside an enclosed rack

Protection

- Do not put foreign objects into the monitor.
- Disconnect the monitor if environment exceeds 60°C/140°F.
- Ensure AC power cord is not trapped under furniture, TV, etc.
- Do not overload wall outlets, extension cords, or convenience receptacles beyond their capacity.
- Never spill liquid of any kind on the monitor.

Notes on cleaning the screen's surface

- The screen's surface is covered with a thin anti-reflective coating to enhance the ergonomic characteristics of the monitor. To ensure that the coating is not damaged, use a soft cloth to clean the screen's surface. If necessary, use a soft cloth lightly moistened with a mild detergent solution, such as hand soap, to wipe the screen.
- Do not use any type of abrasive pad, alkaline cleanser, scouring powder, or solvents such as alcohol or benzene as they might damage the anti-reflective coating.
- If you use a glass cleaning liquid, do not use any type of cleaner containing an anti-static solution or similar additive as this may scratch the screen's coating.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as a ballpoint pen or screwdriver. This type of contact may result in a scratched picture tube.

US

Notes on cleaning the cabinet

- Clean the cabinet, panel and controls with a soft cloth lightly moistened with a mild detergent solution.
- Do not use any type of abrasive pad, scouring powder or solvent, such as alcohol or benzene.

Transportation

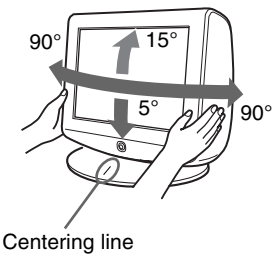
When you transport this monitor for repair or shipment, use the original carton and packing materials.

Display Stand

Do not remove this monitor's stand.

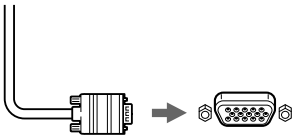
Use of the tilt-swivel

This monitor can be adjusted within the angle shown below. To turn the monitor vertically, hold it at the bottom with both hands. Be careful not to pinch your fingers at the back of the monitor when you tilt the monitor up verticaly.



Setup

1 Connecting your monitor to your computer



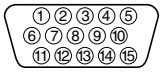
Video signal cable of the monitor

to HD15 of the connecting computer

Connecting to a Macintosh or compatible computer

When connecting this monitor to a Macintosh computer, use the Macintosh adapter (not supplied) if necessary. Connect the Macintosh adapter to the computer before connecting the cable.

The pin assignment of the HD 15 video signal cable



Pin No.	Signal
1	Red
2	Green (Sync on Green)
3	Blue
4	ID (Ground)
5	DDC Ground*
6	Red Ground
7	Green Ground
8	Blue Ground

Pin No.	Signal
9	DDC HOST 5V*
10	Ground
11	ID (Ground)
12	Bi-Directional Data (SDA)*
13	H. Sync
14	V. Sync
15	Data Clock (SCL)*

* DDC (Display Data Channel) is a standard of VESA.

2 Turning on the monitor and computer

1 Connect the power cord to the monitor and press the ⏻ (power) switch to turn on the monitor.

2 Turn on the computer.

No need for specific drivers

This monitor complies with the "DDC" Plug & Play standard and automatically detects all the monitor's information. No specific driver needs to be installed to the computer.
The first time you turn on your PC after connecting the monitor, the setup Wizard may appear on the screen. In this case, follow the on-screen instructions. The Plug & Play monitor is automatically selected so that you can use this monitor.

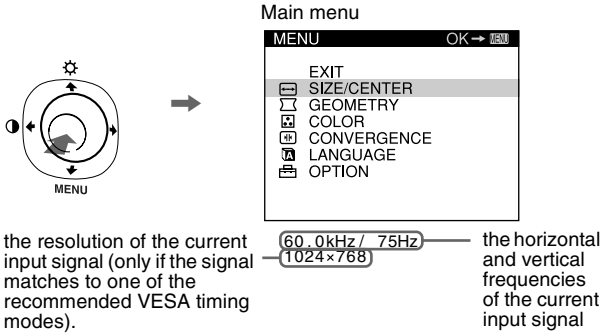
Notes

- Do not touch the pins of the video signal cable connector.
- Check the alignment of the HD15 connector to prevent bending the pins of the video signal cable connector.

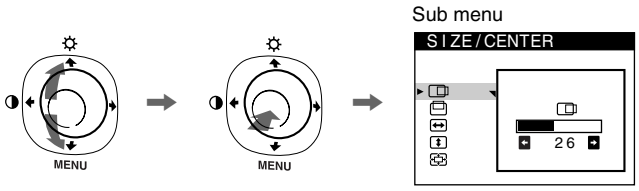
Adjustments

Navigating the menu

1 Press the center of the joystick to display the main menu.



2 Move the joystick ↓/↑ to highlight the main menu that you want to adjust and press the center of the joystick.



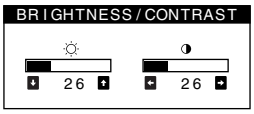
3 Move the joystick ↓/↑ to highlight the submenu that you want to adjust. Then move the joystick ←/→ to make adjustments.

Adjusting the brightness and contrast

Brightness and contrast adjustments are made using a separate BRIGHTNESS/CONTRAST menu. These adjustments are effective for all input signals.

1 Move the joystick in any direction to display the BRIGHTNESS/CONTRAST menu.

2 Move the joystick ↓/↑ to adjust the brightness (☼), and ←/→ to adjust the contrast (◑).



Note

If you set the brightness and contrast level to "0", the picture will black out and no picture will appear.

On-Screen menu adjustments

Main menu icons and adjustment items		Sub menu icons and adjustment items	
	Adjusting the size or centering of the picture*1		Horizontal position
			Horizontal size
			Vertical position
			Vertical size
			Enlarge/reduce
	Adjusting the shape of the picture		Rotating the picture*2
			Expanding or contracting the picture sides*1
			Shifting the picture sides to the left or right*1
			Adjusting the picture width at the top of the screen*1
			Shifting the picture to the left or right at the top of the screen*1
	Adjusting the color of the picture*2	See "▣: To adjust the color of the picture".	
	Adjusting the convergence*2		Horizontally shifts red or blue shadows
			Vertically shifts red or blue shadows
A	Selecting language	Selecting the on-screen menu language*3	
	Additional settings		DEGAUSS: demagnetizes the monitor.
			MOIRE ADJUST: minimizes moire*4
			See "To reset the adjustment".
			Protecting adjustment data (CONTROL LOCK)*5

*1 This adjustment is effective for the current input signal.
*2 This adjustment is effective for all input signals.
*3 Language Menu
- **ENGLISH**
- **FRANÇAIS: French**
- **DEUTSCH: German**
- **ESPAÑOL: Spanish**
- **ITALIANO: Italian**
- **NEDERLANDS: Dutch**
- **SVENSKA: Swedish**
- **РУССКИЙ: Russian**
- **日本語: Japanese**

*4 Example of Moire

*5 Only the ⏻ (power) switch, EXIT, and (CONTROL LOCK) menu will operate.

US

▣ : To adjust the color of the picture

The COLOR settings allow you to adjust the picture's color temperature by changing the color level of the white color field. Colors appear reddish if the temperature is low, and bluish if the temperature is high. This adjustment is useful for matching the monitor's color to a printed picture's colors.

■ Adjustment items

You can select the preset color temperature from 5000K or 9300K. The default setting is 9300K.
If necessary, you can make additional fine adjustments to the color by selecting ▣.

➙← : To reset the adjustment

The RESET option erases your customized settings. To restore your monitor to the factory settings, refer to the following steps.

■ Resetting the adjustment for current input signal

Move the joystick ➡.

■ Resetting the adjustment for all input signals

Hold the joystick ➡ for 2 seconds.

Note

When "reset the adjustment for all input signal" is activated, the customized language selection goes back to the default language of English.

Technical Features

Preset and user modes

When the monitor receives an input signal, it automatically matches the signal to one of the factory preset modes stored in the monitor's memory to provide a high quality picture (see "Preset mode timing table" on page i). For input signals that do not match one of the factory preset modes, the digital Multiscan technology of this monitor ensures that a clear picture appears on the screen for any timing in the monitor's frequency range (For A240 horizontal: 30 – 70 kHz, vertical: 48 – 120 Hz and for A440 horizontal: 30 – 96 kHz, vertical: 48 – 170 Hz). If the picture is adjusted, the adjustment data is stored as a user mode and automatically recalled whenever the same input signal is received.

Power saving function

This monitor meets the power-saving guidelines set by VESA, ENERGY STAR, and NUTEK. If no signal is received by the monitor from your computer, the monitor will automatically reduce power consumption as shown below.

Power mode	Power consumption A240	A440	⏻ (power) indicator
normal operation	≤ 100 W	≤ 130 W	green
active off*	≤ 3 W	≤ 3 W	orange
power off	0 W (Approx.)	0 W (Approx.)	off

* When your computer is in active off mode, MONITOR IS IN POWER SAVE MODE appears on the screen if you press any button on the monitor. After a few seconds, the monitor enters the power saving mode again.

Troubleshooting

■ No picture

If the ⏻ (power) indicator is not lit

- Check that the power cord is properly connected.
- Check that the ⏻ (power) switch is in the "on" position.

The ⏻ (power) indicator is orange

- Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets.
- Check that the HD15 video input connector's pins are not bent or pushed in.
- Check that the computer's power is "on".
- The computer is in power saving mode. Try pressing any key on the computer keyboard or moving the mouse.
- Check that the graphic board is completely seated in the proper bus slot.

If the ⏻ (power) indicator is green or flashing orange

- Use the Self-diagnosis function.

■ Picture flickers, bounces, oscillates, or is scrambled

- Isolate and eliminate any potential sources of electric or magnetic fields such as other monitors, laser printers, electric fans, fluorescent lighting, or televisions.
- Move the monitor away from power lines or place a magnetic shield near the monitor.
- Try plugging the monitor into a different AC outlet, preferably on a different circuit.
- Try turning the monitor 90° to the left or right.
- Check your graphics board manual for the proper monitor setting.
- Confirm that the graphics mode and the frequency of the input signal are supported by this monitor (see "Preset mode timing table" on page i). Even if the frequency is within the proper range, some graphics board may have a sync pulse that is too narrow for the monitor to sync correctly.
- Adjust the computer's refresh rate (vertical frequency) to obtain the best possible picture.

■ Picture is fuzzy

- This monitor has a high luminance mode, so small characters may not appear clearly if the monitor receives signals over 1280 × 1024 resolution. If this occurs, lower the contrast or set the computer to a lower resolution.
- Adjust the brightness and contrast.
- Degauss the monitor.*
- Adjust for minimum moire.

■ Picture is ghosting

- Eliminate the use of video cable extensions and/or video switch boxes.
- Check that all plugs are firmly seated in their sockets.

■ Picture is not centered or sized properly

- Adjust the size or centering. Note that with some input signals and/or graphics board the periphery of the screen is not fully utilized.
- Just after turning on the power switch, the size/center may take a while to adjust properly.

■ Edges of the image are curved

- Adjust the geometry.

■ Wavy or elliptical pattern (moire) is visible

- Adjust for minimum moire.
- Change your desktop pattern.

■ Color is not uniform

- Degauss the monitor.* If you place equipment that generates a magnetic field, such as a speaker, near the monitor, or if you change the direction the monitor faces, color may lose uniformity.

■ White does not look white

- Adjust the color temperature.

■ Monitor buttons do not operate (appears on the screen)

- If the control lock is set to ON, set it to OFF.

■ Letters and lines show red or blue shadows at the edges

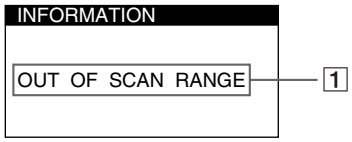
- Adjust the convergence.

■ A hum is heard right after the power is turned on

- This is the sound of the auto-degauss cycle. When the power is turned on, the monitor is automatically degaussed for five seconds.

* If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. A humming noise may be heard, but this is not a malfunction.

On-screen messages



1 If "OUT OF SCAN RANGE" appears:

This indicates that the input signal is not supported by the monitor's specifications. Refer to the following remedies.

- Check that the video frequency range is within that specified for the monitor. If you replaced an old monitor with this monitor, reconnect the old monitor and adjust the frequency range to the following.

  FOR A240
  Horizontal: 30 – 70 kHz; Vertical: 48 – 120 Hz

  FOR A440
  Horizontal: 30 – 96 kHz; Vertical: 48 – 170 Hz

1 If "NO INPUT SIGNAL" appears:

This indicates that no input signal is present. Refer to the following remedies.

- Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets.
- Check that the HD15 video input connector's pins are not bent or pushed in.
- Check that the computer's power is "on."
- Check that the graphic board is completely seated in the proper bus slot.

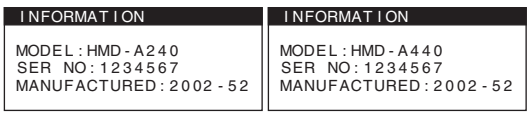
1 If "MONITOR IS IN POWER SAVE MODE" appears:

This indicates that the computer is in power saving mode. This message is displayed only when your computer is in a power saving mode and you press any one of the buttons on the monitor. Refer to the following remedies.

- Try pressing any key on the computer keyboard or moving the mouse.
- Check that the computer's power is "on."
- Check that the graphic board is completely seated in the proper bus slot.

To display this monitor's name, serial number, and date of manufacture.

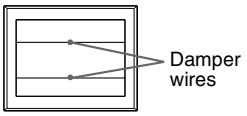
While the monitor is receiving a video signal, press and hold the Joystick for more than five seconds to display this monitor's information box.



US

If thin lines appear on the screen
(damper wires)

These lines do not indicate a malfunction; they are a normal effect of the Trinitron picture tube with this monitor. These are shadows from the damper wires used to stabilize the aperture grille. The aperture grille is the essential element that makes a Trinitron picture tube unique by allowing more light to reach the screen, resulting in a brighter, more detailed picture.



Self-diagnosis function

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer, the screen will go blank and the ⏻ (power) indicator will either light up green or flash orange. If the ⏻ (power) indicator is lit in orange, the computer is in power saving mode. Try pressing any key on the keyboard or moving the mouse.

■ If the ⏻ (power) indicator is green

1 Disconnect the video input cable or turn off the connected computer.

2 Press the ⏻ (power) button twice to turn the monitor off and then on.

3 Move the joystick ➡ for 2 seconds.

If all 4 color bars appear (white, red, green, blue), the monitor is working properly. Reconnect the video input cables. Adjust the brightness and contrast, and check the monitor. If the fault still exists, check your computer.
If the color bars do not appear, there is a potential monitor failure. Inform your authorized Sony dealer of the monitor's condition.

■ If the ⏻ (power) indicator is flashing orange

Turn the monitor OFF and then ON.

If the ⏻ (power) indicator lights up green, the monitor is working properly.
If the ⏻ (power) indicator is still flashing, there is a potential monitor failure. Count the number of seconds between orange flashes of the ⏻ (power) indicator and inform your authorized Sony dealer of the monitor's condition. Be sure to note the model name and serial number of your monitor. Also note the make and model of your computer and graphics board.

Specifications

HMD-A240

CRT	0.24 mm aperture grille pitch (center) 17 inches measured diagonally 90-degree deflection FD Trinitron
Viewable image size	Approx. 327 × 243 mm (w/h) ($12\frac{7}{8}$ × $9\frac{5}{8}$ inches)
Viewing image	Approx. 406 mm (16 inches)
Resolution	
Maximum	Horizontal: 1280 dots Vertical: 1024 lines
Recommended	Horizontal: 1024 dots Vertical: 768 lines
Standard image area	Approx. 312 × 234 mm (w/h) ($12\frac{3}{8}$ × $9\frac{1}{4}$ inches)
Deflection frequency*	Horizontal: 30 to 70 kHz Vertical: 48 to 120 Hz
AC input voltage/current	100 - 120 V, 50 - 60 Hz, Max. 1.7 A
Power consumption	Approx. 100 W
Operating temperature	10 ºC to 40 ºC
Dimensions	Approx. 422 × 432 × 426 mm (w/h/d) ($16\frac{5}{8}$ × $17\frac{1}{8}$ × $16\frac{1}{2}$ inches)
Mass (Monitor Weight)	Approx. 18 kg (39.1 lb)
Plug and Play	DDC2B/DDC2Bi, GTF
Supplied accessories	Power cord (1) Warranty card (1) This instruction manual (1)

HMD-A440

CRT	0.24 mm aperture grille pitch (center) 19 inches measured diagonally 90-degree deflection FD Trinitron
Viewable image size	Approx. 365 × 274 mm (w/h) ($14\frac{3}{8}$ × $10\frac{7}{8}$ inches)
Viewing image	Approx. 456 mm (18 inches)
Resolution	
Maximum	Horizontal: 1920 dots Vertical: 1440 lines
Recommended	Horizontal: 1280 dots Vertical: 1024 lines
Standard image area	Approx. 352 × 264 mm (w/h) ($13\frac{7}{8}$ × $10\frac{3}{8}$ inches)
Deflection frequency*	Horizontal: 30 to 96 kHz Vertical: 48 to 170 Hz
AC input voltage/current	100 - 120 V, 50 - 60 Hz, Max. 2.0 A
Power consumption	Approx. 130 W
Operating temperature	10 ºC to 40 ºC
Dimensions	Approx. 461 × 479 × 471 mm (w/h/d) ($18\frac{1}{8}$ × $19\frac{1}{8}$ × $18\frac{1}{2}$ inches)
Mass (Monitor Weight)	Approx. 26 kg (57 lb)
Plug and Play	DDC2B/DDC2Bi, GTF
Supplied accessories	Power cord (1) Warranty card (1) This instruction manual (1)

* Recommended horizontal and vertical timing condition
- Horizontal sync width should be more than 1.0 µsec.
- Horizontal blanking width should be more than 3.0 µsec.
- Vertical blanking width should be more than 500 µsec.

Design and specifications are subject to change without notice.

Table des Matières

Précautions 3
Configuration 4
Réglages 4
Caractéristiques techniques 6
Dépannage 6
Spécifications 8
Annexe i
Table de synchronisation du mode présélectionné . . . i

- Trinitron® et FD Trinitron® sont des marques commerciales déposées de Sony Corporation.
- Macintosh est une marque commerciale sous licence d'Apple Computer, Inc., déposée aux Etats-Unis et dans d'autres pays.
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- Tous les autres noms de produits mentionnés dans le présent mode d'emploi peuvent être des marques commerciales ou des marques commerciales déposées de leurs sociétés respectives.
- Les symboles "™" et "®" ne sont pas mentionnés systématiquement dans le présent mode d'emploi.

Précautions

Avertissement relatif au raccordement secteur

- Utilisez le cordon d'alimentation fourni.
- Avant de débrancher le cordon d'alimentation, attendez au moins 30 secondes avant de couper l'alimentation afin de permettre le déchargement de l'électricité statique de la surface de l'écran.
- Après avoir branché l'alimentation, l'écran est démagnétisé pendant environ 5 secondes. Ceci génère un champ magnétique puissant autour de l'écran, susceptible d'altérer les données stockées sur les cassettes ou bandes placées à proximité du moniteur. Assurez-vous de ne pas placer d'équipement d'enregistrement magnétique, de bandes ou de disquettes à proximité du moniteur.

La prise électrique doit être installée à proximité de l'appareil et facile d'accès.

Installation

N'installez pas le moniteur dans les endroits suivants :

- sur des surfaces textiles (tapis, couvertures, etc.) ni à proximité de tissus (rideaux, draperies, etc.) qui risquent d'obstruer les orifices de ventilation
- près de sources de chaleur telles que des radiateurs ou des conduits d'air chaud ou à un emplacement exposé aux rayons directs du soleil
- dans un endroit sujet à de fortes variations de température
- dans un endroit sujet à des vibrations mécaniques ou à des chocs
- sur une surface instable
- près d'un équipement générant un champ magnétique, tel qu'un transformateur ou des lignes à haute tension
- près ou sur une surface métallique chargée d'électricité
- dans un endroit poussiéreux ou enfumé
- dans un rack fermé

Protection

- N'introduisez pas de corps étrangers dans le moniteur.
- Débranchez le moniteur si la température ambiante dépasse 60°C/ 140°F.
- Vérifiez que le cordon d'alimentation secteur n'est pas coincé sous un meuble, un téléviseur, etc.
- Ne surchargez pas les prises murales, les rallonges ou les multiprises au-delà de leur capacité.
- Ne jamais renverser de liquide sur le moniteur.

Remarques sur l'entretien de la surface de l'écran

- La surface de l'écran est traitée au moyen d'un revêtement antireflet dans le but de renforcer les propriétés ergonomiques du moniteur. Pour éviter d'endommager ce revêtement, utilisez un chiffon doux pour nettoyer la surface de l'écran. Si nécessaire, employez un chiffon doux légèrement imprégné d'une solution dètergente neutre, par exemple à base de savon de toilette, pour nettoyer l'écran.
- N'utilisez aucun type de tampon abrasif, de nettoyant alcalin, de poudre à récurer ni de solvants tels que de l'alcool ou de la benzine, qui risqueraient d'endommager le revêtement antireflet.
- Si vous utilisez un nettoyant pour vitres, n'utilisez pas de produits contenant une solution antistatique ou une solution similaire qui risque d'abîmer le revêtement de l'écran.
- Ne frottez pas, ne touchez pas et ne tapotez pas la surface de l'écran avec des objets pointus ou abrasifs, tels que la pointe d'un stylo ou un tournevis. Dans le cas contraire, vous pourriez en effet rayer le tube de l'écran.

Remarques sur l'entretien de le chàssis

- Nettoyez le châssis, l'écran et les commandes à l'aide d'un chiffon doux légèrement imbibé d'une solution détergente non agressive.
- N'utilisez pas d'éponge abrasive, de poudre à récurer ou de solvant tel que de l'alcool ou de la benzine.

Transport

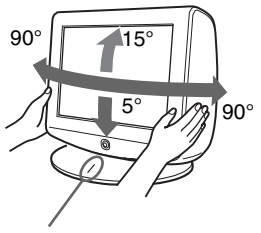
Lorsque vous transportez ce moniteur, utilisez le carton et les matériaux d'emballage d'origine.

Support d'écran

Ne retirez pas le support de moniteur.

Utilisation du support

Ce moniteur peut être réglé suivant l'angle précises ci-dessous. Pour faire pivoter le moniteur verticalement, tenez-le par le bas avec les deux mains. Faites attention à ne pas vous pincer les doigts à l'arrière du moniteur lorsque vous le faites pivoter à la verticale.



ligne de centrage de centrage

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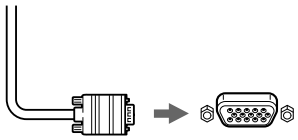
Configuration

1 Raccordez votre moniteur à votre ordinateur



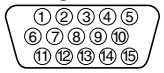
Câble de signal vidéo du moniteur

vers le HD15 de l'ordinateur raccordé

Raccordement à un Macintosh ou un ordinateur compatible

Lorsque vous raccordez ce moniteur à un ordinateur Macintosh, utilisez l'adaptateur Macintosh (non fourni), le cas échéant. Raccordez l'adaptateur Macintosh à l'ordinateur avant de brancher le câble.

Configuration des broches du câble de signal vidéo HD 15



N° de broche	Signal
1	Rouge
2	Vert (Sync sur Vert)
3	Bleu
4	ID (Masse)
5	DDC (Masse)*
6	Masse Rouge
7	Masse Vert
8	Masse Bleu

N° de broche	Signal
9	DDC HOST 5V*
10	Masse
11	ID (Masse)
12	Données bi-directionnelles (SDA)*
13	Sync H
14	Sync V
15	Horloge de données (SCL)*

* DDC (Display Data Channel) est une norme de VESA.

2 Mettez le moniteur et l'ordinateur sous tension

1 Raccordez le cordon d'alimentation au moniteur puis appuyez sur l'interrupteur ⏻ (alimentation) afin de mettre le moniteur sous tension.

2 Mettez l'ordinateur sous tension.

Vous n'avez pas besoin de pilotes spécifiques

Ce moniteur est conforme à la norme Plug & Play "DDC" et détecte automatiquement l'ensemble des informations relatives au moniteur. Il n'est pas nécessaire d'installer un pilote ou un gestionnaire supplémentaire sur l'ordinateur.

Lorsque vous mettez votre ordinateur sous tension pour la première fois, après l'avoir raccordé au moniteur, il est possible que l'Assistant d'ajout de nouveau matériel apparaisse à l'écran. Dans ce cas, suivez les instructions affichées. Le moniteur Plug & Play approprié est sélectionné automatiquement, vous permettant ainsi de l'utiliser.

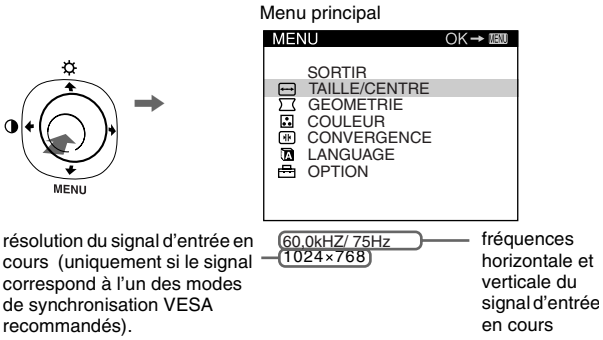
Remarques

- Ne touchez pas les broches du connecteur du câble de signal vidéo.
- Vérifiez l'alignement du connecteur HD15 pour ne pas tordre les broches du connecteur du câble de signal vidéo.

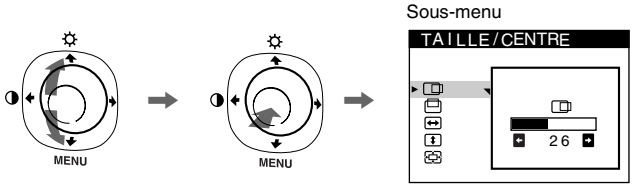
Réglages

Navigation dans le menu

1 Appuyez au centre du joystick pour afficher le menu principal.



2 Déplacez le joystick ↓/↑ pour mettre en surbrillance le menu principal que vous souhaitez régler, puis appuyez au centre du joystick.



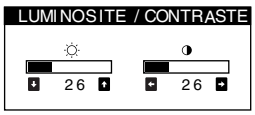
3 Déplacez le joystick ↓/↑ pour mettre en surbrillance le sous-menu que vous souhaitez régler. Déplacez ensuite le joystick ←/→ pour procéder aux réglages.

Réglage de la luminosité et du contraste

Vous pouvez modifier la luminosité et le contraste à l'aide du menu LUMINOSITE/CONTRASTE. Ces réglages s'appliquent à tous les signaux d'entrée.

1 Déplacez le joystick dans l'une des directions pour afficher le menu LUMINOSITE/CONTRASTE.

2 Déplacez le joystick vers ↓/↑ pour régler la luminosité (☼) et vers ←/→ pour régler le contraste (◑).



Remarque

Si vous réglez la luminosité et le contraste sur "0", l'image disparaît et plus aucune image ne s'affiche.

Réglages du menu d'écran

Icônes du menu principal et éléments de réglage		Icônes du sous-menu et éléments de réglage	
	Réglage de la taille ou du centrage de l'image*1		Position horizontale
			Taille horizontale
			Position verticale
			Taille verticale
			Agrandissement/Réduction
	Réglage de la forme de l'image		Rotation de l'image*2
			Étirement ou contraction des côtés de l'image*1
			Déplacement des bords de l'image vers la droite ou la gauche*1
			Réglage de la largeur de l'image en haut de l'écran*1
			Déplacement de l'image vers la droite ou la gauche en haut de l'écran*1
	Réglage de la couleur de l'image*2	Voir " : pour régler la couleur de l'image".	
	Réglage de la convergence*2		Décalage horizontal des ombres rouges ou bleues
			Décalage vertical des ombres rouges ou bleues
	Sélection de la langue	Sélection de la langue du menu d'écran*3	
	Réglages supplémentaires		DEMAGNET : démagnétise le moniteur.
			REGLAGE MOIRE : réduit le moirage*4
			Voir "Réinitialisation des réglages".
			Protection des données de réglage (VERROU MENU)*5

*1 Ce réglage est effectif pour le signal d'entrée courant.
*2 Ce réglage est effectif pour tous les autres signaux d'entrée.
*3 Menu de langues
- **ENGLISH : Anglais**
- **FRANÇAIS**
- **DEUTSCH : Allemand**
- **ESPAÑOL : Espagnol**
- **ITALIANO : Italien**
- **NEDERLANDS : Néerlandais**
- **SVENSKA : Suédois**
- **РУССКИЙ : Russe**
- **日本語 : Japonais**

*4 Exemple de moiré

*5 Seul le commutateur ⏻ (d'alimentation), SORTIR et (VERROU MENU) fonctionnent.

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: pour régler la couleur de l'image

Les paramètres COULEUR permettent de régler la température des couleurs de l'image en changeant le niveau de couleur des champs de couleur blanche. Les couleurs apparaissent rougeâtres lorsque la température est basse et bleuâtres lorsqu'elle est élevée. Ce réglage s'avère pratique pour faire correspondre les couleurs du moniteur aux couleurs d'une image imprimée.

■ Eléments de réglage

Vous pouvez sélectionner une température des couleurs prédéfinie, à savoir 5000K ou 9300K. Le réglage par défaut est 9300K.
Si nécessaire, vous pouvez affiner le réglage de la couleur en sélectionnant .

: Réinitialisation des réglages

L'option REINITIALISATION permet d'effacer vos réglages personnalisés. Pour rétablir les réglages effectués en usine, procédez comme suit.

■ Réinitialisation du réglage du signal d'entrée du courant

Déplacez le joystick ➡.

■ Réinitialisation du réglage de tous les signaux d'entrée

Tenez le joystick ➡ pendant 2 secondes.

Remarque

Lorsque "réinitialisation des réglages pour tous les signaux d'entrée" est activée, la sélection de la langue personnalisée revient automatiquement sur la langue par défaut : l'anglais.

Caractéristiques techniques

Modes préréglés et personnalisés

Lorsque le moniteur reçoit un signal d'entrée, il compare automatiquement le signal à l'un des modes préréglés en usine mémorisés afin de fournir une image de haute qualité (voir le tableau de modes prédéfinis (Preset mode timing table) page i). Pour les signaux d'entrée qui ne correspondent à aucun mode préréglé en usine, la technologie Multiscan numérique intégrée à ce moniteur permet d'afficher une image claire à l'écran pour toutes les synchronisations de la plage de fréquence du moniteur (Pour A240 horizontale : 30 – 70 kHz, verticale : 48 – 120 Hz et pour A440 horizontale : 30 – 96 kHz, verticale : 48 – 170 Hz). Si l'image est réglée, les données de réglage sont mémorisées comme un mode utilisateur et sont rappelées automatiquement chaque fois que le même signal d'entrée est reçu.

Fonction d'économie d'énergie

Ce moniteur satisfait aux critères d'économie d'énergie VESA, ENERGY STAR et NUTEK. Si le moniteur ne reçoit aucun signal en provenance de l'ordinateur, il réduit automatiquement sa consommation d'énergie de la façon suivante.

Mode d'alimentation	Consommation électrique A240	A440	indicateur ⏻ (alimentation)
fonctionnement normal	≤ 100 W	≤ 130 W	vert
inactif*	≤ 3 W	≤ 3 W	orange
hors tension	0 W (environ)	0 W (environ)	désactivé

* Lorsque votre ordinateur est en mode inactif, l'indication MONITEUR EN MODE D'ECONOMIE D'ENERGIE apparaît à l'écran si vous appuyez sur une touche quelconque du moniteur. Après quelques secondes, le moniteur repasse en mode d'économie d'énergie.

Dépannage

■ Aucune image

Si l'indicateur ⏻ (alimentation) est éteint

- Assurez-vous que le cordon d'alimentation est raccordé correctement.
- Vérifiez que l'interrupteur ⏻ (alimentation) est en position activée (on).

L'indicateur ⏻ (alimentation) est allumé en orange

- Vérifiez que le câble de signal vidéo est correctement raccordé et que toutes les prises sont complètement enfichées.
- Vérifiez que les broches du connecteur d'entrée vidéo HD15 ne sont pas pliées ni enfoncées.
- Assurez-vous que l'ordinateur est sous tension.
- L'ordinateur est en mode d'économie d'énergie. Essayez d'appuyer sur une touche ou de déplacer la souris.
- Vérifiez que la carte graphique est bien insérée dans le connecteur de bus approprié.

Si l'indicateur ⏻ (alimentation) est vert ou orange clignotant

- Utilisez la fonction d'auto-diagnostic.

■ L'image scintille, sautille, oscille ou est brouillée

- Isolez et supprimez les sources potentielles de champs électriques ou magnétiques tels que d'autres moniteurs, des imprimantes laser, des éclairages fluorescents ou des téléviseurs.
- Éloignez le moniteur des lignes à haute tension ou placez un blindage magnétique à proximité du moniteur.
- Banchez le moniteur sur une autre prise secteur, de préférence raccordée à un autre circuit.
- Faites pivoter le moniteur de 90° vers la gauche ou la droite.
- Vérifiez le réglage adéquat pour le moniteur dans le mode d'emploi de votre carte graphique.
- Assurez-vous que le mode graphique et la fréquence du signal d'entrée sont pris en charge par ce moniteur (voir le tableau de modes prédéfinis (Preset mode timing table) page i). Même si la fréquence est comprise dans la plage appropriée, il est possible que certaines cartes graphiques aient une impulsion de synchronisation trop étroite pour que le moniteur puisse se synchroniser correctement.
- Ajustez le taux de régénération de l'ordinateur (fréquence verticale) de façon à obtenir la meilleure image possible.

■ L'image est floue

- Ce moniteur possède un mode de luminance élevé : par conséquent, il est possible que les petits caractères n'apparaissent pas clairement lorsque le moniteur reçoit des signaux d'une résolution supérieure à 1280 × 1024. Dans ce cas, abaissez le contraste du moniteur ou le niveau de résolution de l'ordinateur.
- Ajustez la luminosité et le contraste.
- Démagnétisez le moniteur.*
- Réduisez le moirage au maximum.

■ Des images fantômes apparaissent

- N'utilisez pas de prolongateurs de câble vidéo et/ou de boîtiers de commutation vidéo.
- Vérifiez que toutes les fiches sont bien connectées dans leurs prises respectives.

■ L'image n'est pas centrée ou est de taille incorrecte

- Ajustez la taille ou le centrage. Veuillez noter que pour certains signaux d'entrée et/ou cartes graphiques, il est possible que l'image ne remplisse pas totalement la surface de l'écran.
- Juste après la commutation de l'interrupteur d'alimentation, le réglage correct de la taille et du centrage peut prendre un certain temps.

■ Les bords de l'image sont incurvés

- Réglez la géométrie.

■ Un motif ondulatoire ou elliptique (moiré) est visible

- Réduisez le moirage au maximum.
- Changez le motif de votre bureau.

■ Les couleurs ne sont pas uniformes

- Démagnétisez le moniteur.* Si vous placez à côté du moniteur un appareil qui génère un champ magnétique, comme un haut-parleur, ou si vous changez l'orientation du moniteur, il est possible que les couleurs perdent leur uniformité.

■ Le blanc n'est pas blanc

- Réglez la température des couleurs.

■ Les touches du moniteur ne fonctionnent pas (🔑 apparaît à l'écran)

- Si la fonction de verrouillage des commandes est réglée sur ACTIF, réglez-la sur INACTIF.

■ Les bords des lettres et des lignes sont soulignés d'une ombre rouge ou bleue

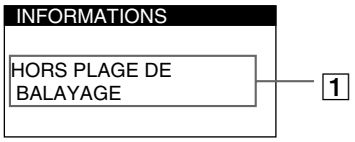
- Réglez la convergence.

■ Un bourdonnement est audible juste après la mise sous tension

- Il s'agit du son provoqué par le cycle de démagnétisation automatique. Lorsque le moniteur est mis sous tension, il est automatiquement démagnétisé pendant 5 secondes.

* Si un deuxième cycle de démagnétisation est nécessaire, attendez au minimum 20 minutes pour un résultat optimal. Un bourdonnement peut être audible, ceci est normal.

Messages à l'écran



1 Si "HORS PLAGE DE BALAYAGE" s'affiche :

Indique que les spécifications du moniteur ne prennent pas le signal d'entrée en charge. Reportez-vous aux remèdes suivants.
Vérifiez si la plage de fréquence vidéo correspond aux spécifications du moniteur. Si vous remplacez un ancien moniteur par ce moniteur, reconnectez l'ancien moniteur et ajustez la plage de fréquence comme suit.

POUR A240
Horizontale: 30 – 70 kHz; Verticale: 48 – 120 Hz

POUR A440
Horizontale: 30 – 96 kHz; Verticale: 48 – 170 Hz

1 Si "PAS ENTREE VIDEO" s'affiche :

Indique qu'aucun signal n'est entré. Reportez-vous aux remèdes suivants.

- Vérifiez si le câble de signal vidéo est correctement raccordé et si toutes les fiches sont bien insérées dans les prises.
- Vérifiez si les broches du connecteur d'entrée vidéo HD15 ne sont pas tordues ni enfoncées.
- Vérifiez si le commutateur d'alimentation de l'ordinateur est réglé sur "on".
- Vérifiez si la carte graphique est complètement enfoncée dans la fente de bus appropriée.

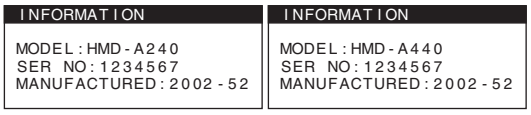
1 Si "MONITEUR EN MODE D'ECONOMIE D'ENERGIE" s'affiche :

Indique que l'ordinateur est en mode d'économie d'énergie. Ce message est uniquement affiché lorsque votre ordinateur est en mode d'économie d'énergie et que vous appuyez sur l'une des touches du moniteur. Reportez-vous aux remèdes suivants.

- Essayez d'appuyer sur une touche ou de déplacer la souris.
- Vérifiez si le commutateur d'alimentation de l'ordinateur est réglé sur "on".
- Vérifiez si la carte graphique est complètement enfoncée dans la fente de bus appropriée.

Affichage de l'identification du moniteur, du numéro de série et de la date de fabrication.

Pendant que le moniteur reçoit un signal vidéo, appuyez sur le joystick et maintenez-le enfoncé pendant au moins cinq secondes afin d'afficher les informations relatives au moniteur.



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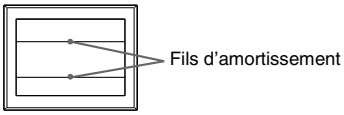
Si des lignes fines apparaissent à l'écran (fils d'amortissement)

Ces lingnes ne constituent aucunement un dysfonctionnement ; elles résultent de l'utilisation du tube image Trinitron sur ce moniteur. Ces lignes sont en fait l'ombre des fils d'amortissement employés pour stabiliser la grille d'ouverture. Cette grille est un composant essentiel qui rend le tube d'image Trinitron unique en laissant passer une plus grande quantité de lumière vers l'écran, permettant ainsi d'obtenir une image plus lumineuse et plus détaillée.



Fonction d'auto-diagnostic

Ce moniteur est équipé d'une fonction d'auto-diagnostic. En cas de problème avec le moniteur ou l'ordinateur, rien n'est affiché à l'écran et l'indicateur ⏻ (alimentation) s'allume en vert ou clignote en orange. Si l'indicateur ⏻ (alimentation) est allumé en orange, l'ordinateur est en mode d'économie d'énergie. Essayez d'appuyer sur une touche ou de déplacer la souris.

■ Si l'indicateur ⏻ (alimentation) s'allume en vert

1 Débranchez le câble d'entrée vidéo ou mettez l'ordinateur raccordé hors tension.

2 Appuyez deux fois sur la touche ⏻ (alimentation) pour mettre le moniteur hors tension, puis sous tension.

3 Déplacez le joystick dans le sens ➡ pendant 2 secondes.

Si les quatre barres de couleurs apparaissent (blanc, rouge, vert et bleu), le moniteur fonctionne correctement. Reconnectez les câbles d'entrée vidéo. Réglez la luminosité et le contraste, puis vérifiez le moniteur. Si le défaut n'a pas disparu, vérifiez l'état de l'ordinateur. Si les barres de couleur n'apparaissent pas, il est possible que le moniteur ne fonctionne pas normalement. Informez votre revendeur Sony agréé de l'état du moniteur.

■ Si l'indicateur ⏻ (alimentation) clignote en orange

Eteignez puis rallumez le moniteur.

Si l'indicateur ⏻ (alimentation) est allumé en vert, le moniteur fonctionne correctement.
Si l'indicateur ⏻ (alimentation) clignote toujours, il est possible que le moniteur ne fonctionne pas normalement. Comptez le nombre de secondes entre les clignotements oranges de l'indicateur ⏻ (alimentation) et informez votre revendeur Sony agréé de l'état du moniteur. Notez soigneusement le modèle et le numéro de série du moniteur. Notez également la marque et le modèle de l'ordinateur et de la carte graphique.

Spécifications

HMD-A240

Tube cathodique	Ouverture de grille de 0,24 mm (centrale) 17 pouces mesurés en diagonale Déflexion de 90 degrés. Trinitron FD
Taille d'image affichée	Environ 327 × 243 mm (l/h) (12 7/8 × 9 5/8 pouces)
Image affichéee	Environ 406 mm (16 pouces)
Résolution	
Maximum	Horizontale : 1280 points Verticale : 1024 lignes
Recommandée	Horizontale : 1024 points Verticale : 768 lignes
Zone d'image standard	Environ 312 × 234 mm (l/h) (12 3/8 × 9 1/4 pouces)
Fréquence de déflexion	Horizontale : 30 à 70 kHz Verticale : 48 à 120 Hz
Tension/courant d'entrée	100 - 120 V, 50 - 60 Hz, Max. 1,7 A
Consommation électrique	Environ 100 W
Température d'utilisation	10 ºC à 40 ºC
Dimensions	Environ 422 × 432 × 426 mm (l/h/p) (16 5/8 × 17 1/8 × 16 1/2 pouces)
Masse	Environ 18 kg (39,1 livres)
Plug and Play	DDC2B/DDC2Bi GTF
Accessoires fournis	Cordon d'alimentation (1) Carte de garantie (1) Le présent mode d'emploi

HMD-A440

Tube cathodique	Ouverture de grille de 0,24 mm (centrale) 19 pouces mesurés en diagonale Déflexion de 90 degrés. Trinitron FD
Taille d'image affichée	Environ 365 × 274 mm (l/h) (14 3/8 × 10 7/8 pouces)
Image affichéee	Environ 456 mm (18 pouces)
Résolution	
Maximum	Horizontale : 1920 points Verticale : 1440 lignes
Recommandée	Horizontale : 1280 points Verticale : 1024 lignes
Zone d'image standard	Environ 352 × 264 mm (l/h) (13 7/8 × 10 3/8 pouces)
Fréquence de déflexion	Horizontale : 30 à 96 kHz Verticale : 48 à 170 Hz
Tension/courant d'entrée	100 - 120 V, 50 - 60 Hz, Max. 2,0 A
Consommation électrique	Environ 130 W
Température d'utilisation	10 ºC à 40 ºC
Dimensions	Environ 461 × 479 × 471 mm (l/h/p) (18 1/8 × 19 1/8 × 18 1/2 pouces)
Masse	Environ 26 kg (57 livres)
Plug and Play	DDC2B/DDC2Bi GTF
Accessoires fournis	Cordon d'alimentation (1) Carte de garantie (1) Le présent mode d'emploi

* Condition de synchronisation horizontale et verticale recommandée

- La largeur de synchronisation horizontale doit être supérieure à 1,0 µsec.
- La largeur de suppression horizontale doit être supérieure à 3,0 µsec.
- La largeur de suppression verticale doit être supérieure à 500 µsec.

La conception et les spécifications sont sujettes à modifications sans préavis.

Índice

Precauciones 3
Configuración 4
Ajustes 4
Características técnicas 6
Solución de problemas 6
Especificaciones 8
Apéndice i
Tabla de sincronización de modo predefinido i

- Trinitron® y FD Trinitron®son marcas comerciales registradas de Sony Corporation.
- Macintosh es una marca comercial de Apple Computer, Inc., registrada en EE.UU. y otros países.
- Windows® y MS-DOS son marcas comerciales registradas de Microsoft Corporation en Estados Unidos y otros países.
- IBM PC/AT y VGA son marcas comerciales registradas de IBM Corporation de EE.UU.
- VESA y DDC™ son marcas comerciales de Video Electronics Standard Association.
- ENERGY STAR es una marca registrada de EE.UU.
- El resto de los nombres de productos mencionados en este manual pueden ser marcas comerciales o marcas comerciales registradas de sus respectivas compañías.
- Además, "™" y "®" no se mencionan en cada caso en este manual.

Precauciones

Advertencia sobre las conexiones de la alimentación

- Utilice el cable de alimentación suministrado.
- Antes de desconectar el cable de alimentación, espere al menos 30 segundos tras desactivar la alimentación para permitir que se descargue la electricidad estática de la superficie de la pantalla.
- Tras activar la alimentación, la pantalla se desmagnetiza durante unos 5 segundos. Esto genera un intenso campo magnético alrededor de la pantalla que puede afectar a los datos almacenados en discos y cintas magnéticas que se encuentren cerca del monitor. Asegúrese de mantener discos, cintas y equipos de grabación magnética alejados del monitor.

El equipo debe instalarse cerca de una toma de corriente de fácil acceso.

Instalación

No instale el monitor en los siguientes lugares:

- sobre superficies (alfombras, mantas, etc.) ni cerca de materiales (cortinas, tapices, etc.) que puedan bloquear los orificios de ventilación
- cerca de fuentes de calor, como radiadores o conductos de aire caliente, ni en lugares expuestos a la luz solar directa
- en lugares expuestos a cambios bruscos de temperatura
- en lugares sujetos a vibraciones mecánicas o golpes
- sobre una superficie inestable
- cerca de equipos que generen magnetismo, como transformadores o líneas eléctricas de alto voltaje
- cerca o sobre superficies metálicas con carga eléctrica
- en lugares polvorientos o con humos
- dentro de un soporte cerrado

Protección

- No introduzca objetos extraños en el monitor.
- Desconecte el monitor si la temperatura ambiente supera los 60°C/ 140°F.
- Asegúrese de que el cable de alimentación de CA no queda atrapado debajo de muebles, un TV, etc.
- No sobrecargue las tomas murales, los cables prolongadores ni los receptáculos de alimentación por encima de sus capacidades.
- No derrame nunca ningún tipo de líquido sobre el monitor.

Notas sobre la limpieza de la superficie de la pantalla

- La superficie de la pantalla dispone de una fina capa antirreflejos para realzar las caracteristicas del monitor. Con el fin de evitar dañar dicha capa, emplee un paño suave para limpiar la superficie de la pantalla. Si es necesario, utilice un paño suave ligeramente humedecido con una solución detergente poco concentrada, como jabón de tocador, para limpiar la pantalla.
- No utilice ningún tipo de estropajo abrasivo, productos de limpieza alcalinos, detergente en polvo ni disolventes, como alcohol o bencina, ya que la capa antirreflejos podria dañarse.
- Si utiliza un producto líquido de limpieza de cristales, no emplee ningún tipo de producto que contenga soluciones antiestáticas ni aditivos similares, ya que puede dañar el revestimiento de la pantalla.
- No frote, toque, ni golpee la superficie de la pantalla con objetos afilados o abrasivos, como un bolígrafo o un destornillador. Este tipo de contacto puede rayar el tubo de imagen.

Notas sobre la limpieza del gabinete

- Limpie el exterior, el panel y los controles con un paño suave ligeramente humedecido con una solución detergente poco concentrada.
- No utilice estropajos abrasivos, detergente en polvo ni disolventes, como alcohol o bencina.

Transporte

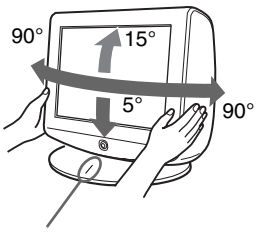
Cuando transporte este monitor para su reparación o desplazamiento, utilice la caja de cartón y materiales de embalaje originales.

Base del monitor

No remueva la base del monitor.

Uso de la base

Este monitor puede ajustarse según el ángulo que aparece abajo. Para colocar el monitor en posición vertical, sujételo por la parte inferior con ambas manos. Tenga cuidado de no pellizcarse los dedos con la parte posterior del monitor cuando lo incline verticalmente.



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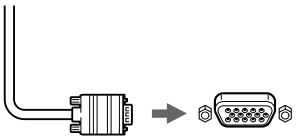
Configuración

1 Conexión del monitor a la computadora



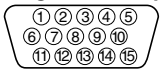
Cable de señal de vídeo del monitor

a HD15 de la computadora conectado

Conexión de una computadora Macintosh o compatible

Cuando connecte este monitor a una computadora Macintosh, utilice el adaptor Macintosh (no suministrado) en caso de ser necesario. Conecte el adaptador Macintosh a la computadora antes de conectar el cable.

Asignación de pines del cable de señal de vídeo HD 15



Terminal nº	Señal
1	Rojo
2	Verde (Sincronización en verde)
3	Azul
4	Identificación (Común)
5	Común DDC*
6	Común rojo
7	Común verde
8	Común azul

Terminal nº	Señal
9	DDC HOST 5V*
10	Común
11	Identificación (Común)
12	Datos bidireccionales (SDA)*
13	Sincronización H.
14	Sincronización V.
15	Reloj de datos (SCL)*

* DDC (Canal de datos de visualización) es un estándar de VESA.

2 Encendido del monitor y la computadora

1 Conecte el cable de alimentación al monitor y oprima el interruptor ⏻ (alimentación) para encender dicho monitor.

2 Encienda la computadora.

No necesita controladores específicos

Este monitor cumple con el estándar Plug & Play "DDC" y detecta automáticamente toda la información de dicho monitor. No es preciso instalar ningún controlador específico en la computadora.
La primera vez que encienda el PC después de conectar el monitor, es posible que aparezca el asistente de instalación en pantalla. En este caso, siga las instrucciones en pantalla. El monitor Plug & Play se selecciona automáticamente, por lo que puede utilizar este monitor.

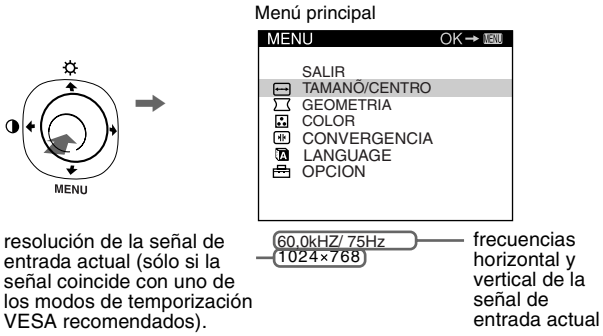
Notas

- No toque los terminales del conector del cable de señal de vídeo.
- Compruebe la alineación del conector HD15 para evitar que se doblen los pines del conector del cable de señal de vídeo.

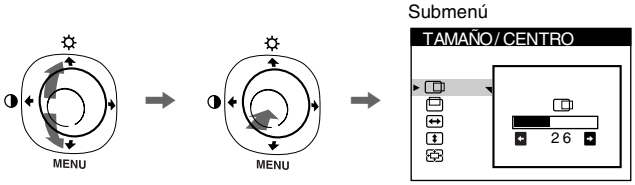
Ajustes

Navegación por el menú

1 Oprima el centro del botón de control para mostrar el menú principal.



2 Mueva el botón de control ↓/↑ para resaltar el menú principal que desee ajustar y oprima el centro del botón de control.



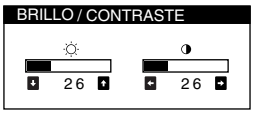
3 Mueva el botón de control ↓/↑ para resaltar el submenú que desea ajustar. A continuación, mueva el botón de control ←/→ para realizar los ajustes.

Ajuste del brillo y el contraste

El ajuste del brillo y el contraste se efectúa mediante un menú BRILLO/CONTRASTE separado. Estos ajustes son efectivos para todo tipo de señales de entrada.

1 Mueva el botón de control en cualquier dirección para abrir el menú BRILLO/CONTRASTE.

2 Mueva el botón de control ↓/↑ para ajustar el brillo (☼) y ←/→ para ajustar el contraste (◑).



Nota

Si establece el nivel de brillo y contraste en "0", la pantalla se oscurecerá y no podrá ver ninguna imagen.

Ajustes de menús en pantalla

Iconos del menú principal y elementos de ajuste		Iconos del submenú y elementos de ajuste	
	Ajuste del tamaño o centrado de la imagen*1		Posición horizontal
			Tamaño horizontal
			Posición vertical
			Tamaño vertical
			Aumentar/reducir
	Ajuste de la forma de la imagen		Giro de la imagen*2
			Expansión o contracción de los lados de la imagen*1
			Desplazamiento de los lados de la imagen a la izquierda o la derecha*1
			Ajuste de la anchura de la imagen en la parte superior de la pantalla*1
			Desplazamiento de la imagen a la izquierda o la derecha en la parte superior de la pantalla*1
	Ajuste del color de la imagen*2	Consulte "▣: Para ajustar el color de la imagen".	
	Ajuste de la convergencia*2		Desplazamiento de las sombras rojas o azules en sentido horizontal
			Desplazamiento de las sombras rojas o azules en sentido vertical
A	Selección del idioma	Selección del idioma del menú de pantalla*3	
	Ajustes adicionales		DESMAGNET: desmagnetiza el monitor.
			AJUSTE MUARÉ: minimiza el muaré*4
			Consulte "Restauración de los ajustes".
			Protección de los datos de ajuste (BLOQUEO DE AJUSTES)*5

*1 Este ajuste es efectivo para la señal de entrada actual.
*2 Este ajuste es efectivo para todas las señales de entrada.
*3 Menú de idiomas
- **ENGLISH: Inglés**
- **FRANÇAIS: Francés**
- **DEUTSCH: Alemán**
- **ESPAÑOL**
- **ITALIANO: Italiano**
- **NEDERLANDS: Holandés**
- **SVENSKA: Sueco**
- **РУССКИЙ: Ruso**
- **日本語: Japonés**

*4 Ejemplo de muaré

*5 Sólo funcionará el interruptor ⏻ (alimentación), SALIR y el menú (BLOQUEO DE AJUSTES).

▣: Para ajustar el color de la imagen

Los ajustes de COLOR permiten definir la temperatura del color de la imagen cambiando el nivel del color blanco. Los colores aparecerán con un tono rojizo si la temperatura es baja, y con un tono azulado si es alta. Este ajuste es útil para hacer coincidir el color del monitor con los colores de imágenes impresas.

■ Elementos de ajuste

Puede seleccionar la temperatura del color predefinido en 5000K o 9300K. La configuración predeterminada es 9300K.
Si es necesario, puede hacer pequeños ajustes adicionales al color mediante la selección de ▣.

⇢⇠ : Restauración de los ajustes

La opción RESTAURAR borra las configuraciones personalizadas. Para devolver al monitor la configuración de fábrica, siga los pasos siguientes:

■ Para reconfigurar el ajuste para la señal de entrada actual

Mueva el botón de control ➡.

■ Para reconfigurar el ajuste para todas las señales de entrada

Sujete el botón de control ➡ durante 2 segundos.

Nota

Al activar la "restauración del ajuste para todas las señales de entrada", la selección de idioma personalizada volverá al idioma original (inglés).

ES

Características técnicas

Modos predefinidos y de usuario

Cuando el monitor recibe una señal de entrada, hace coincidir automáticamente la señal con uno de los modos predefinidos en fábrica almacenados en la memoria del monitor para mostrar una imagen de alta calidad (consulte la "Tabla de temporización de modo predefinido (Preset mode timing table)" en la página i). Con respecto a las señales de entrada que no coinciden con ninguno de los modos predefinidos en fábrica, la tecnología digital Multiscan de este monitor garantiza la presentación en pantalla de imágenes nítidas para cualquier señal dentro del rango de frecuencias del monitor (Para A240 horizontal: 30 a 70 kHz, vertical: 48 a 120 Hz y para A440 horizontal: 30 a 96 kHz, vertical: 48 a 170 Hz). Si la imagen se ajusta, los datos de ajuste se almacenarán como un modo de usuario y se recuperarán automáticamente siempre que se reciba la misma señal de entrada.

Función de ahorro de energía

Este monitor cumple con las directrices de ahorro de energía definidas por VESA, ENERGY STAR y NUTEK. Si el monitor no recibe ninguna señal de la computadora conectado, dicho monitor reducirá automáticamente el consumo de energía como se muestra a continuación.

Modo de alimentación	Consumo de energía A240	A440	Indicador ⏻ (alimentación)
funcionamiento normal	≤ 100 W	≤ 130 W	verde
activo inactivo*	≤ 3 W	≤ 3 W	naranja
alimentación desactivada	0 W (Aprox.)	0 W (Aprox.)	apagado

* Cuando el ordenador se encuentra en el modo activo inactivo, el mensaje MONITOR EN MODO AHORRO ENERGIA aparece en pantalla al pulsar cualquier botón del monitor. Transcurridos unos segundos, el monitor entra de nuevo en el modo de ahorro de energía.

Solución de problemas

■ No aparece la imagen

Si el indicador ⏻ (alimentación) no se ilumina

- Compruebe que el cable de alimentación está correctamente conectado.
- Compruebe que el interruptor ⏻ (alimentación) se encuentra en la posición de encendido.

El indicador ⏻ (alimentación) aparece en naranja

- Compruebe que el cable de señal de vídeo está correctamente conectado y que todos los enchufes están perfectamente insertados en sus clavijas.
- Compruebe que los pines del conector de entrada de vídeo HD15 no están doblados ni aplastados.
- Compruebe que la alimentación de la computadora está activada.
- La computadora está en el modo de ahorro de energía. Pulse cualquier tecla del teclado de la computadora o mueva el ratón.
- Compruebe que la tarjeta gráfica se encuentra completamente insertada en la ranura bus adecuada.

Si el indicador ⏻ (alimentación) se ilumina en verde o parpadea en naranja

- Utilice la función de autodiagnóstico.

■ La imagen parpadea, se ondula, oscila o aparece codificada

- Aísle y elimine las fuentes potenciales de campos eléctricos o magnéticos, como otros monitores, impresoras láser, ventiladores eléctricos, luces fluorescentes o televisores.
- Aleje el monitor de líneas eléctricas o instale una protección magnética cerca del monitor.
- Enchufe el monitor en una toma de CA diferente, preferiblemente de un circuito diferente.
- Gire el monitor 90° a la izquierda o la derecha.
- Consulte el manual de la tarjeta gráfica para obtener información sobre el ajuste adecuado para el monitor.
- Compruebe que este monitor admite el modo gráfico y la frecuencia de la señal de entrada (consulte la "Tabla de temporización de modo predefinido (Preset mode timing table)" en la página i). Aunque la frecuencia se encuentre dentro del rango adecuado, algunas tarjetas gráficas pueden tener un pulso de sincronización demasiado estrecho para que el monitor se sincronice correctamente.
- Ajuste la frecuencia de barrido (frecuencia vertical) de la computadora para obtener la mejor imagen posible.

■ La imagen es borrosa

- Este monitor tiene un alto grado de luminancia. Por consiguiente, es posible que los caracteres pequeños no se vean claramente cuando el monitor recibe señales con una resolución superior a 1280 × 1024. Si esto sucede, reduzca el contraste o ajuste la computadora en una resolución inferior.
- Ajuste el brillo y el contraste.
- Desmagnetice el monitor.*
- Ajuste para obtener mínimo muaré.

■ Aparecen imágenes fantasma

- Deje de utilizar cables prolongadores de vídeo y/o dispositivos de conmutación de vídeo.
- Compruebe que todos los enchufes están firmemente insertados en sus receptáculos.

■ La imagen no está centrada o su tamaño no es correcto

- Ajuste el tamaño o el centrado. Tenga en cuenta que con determinadas señales de entrada y/o tarjetas gráficas, la periferia de la pantalla no se utiliza por completo.
- Inmediatamente después de activar el interruptor de alimentación, el tamaño/centrado pueden tardar unos instantes en ajustarse adecuadamente.

■ Los bordes de la imagen aparecen curvos

- Ajuste la geometría.

■ Aparece un patrón ondulado o elíptico (muaré)

- Ajuste para obtener mínimo muaré.
- Cambie el patrón de escritorio.

■ El color no es uniforme

- Desmagnetice el monitor.* Si coloca equipos que generen campos magnéticos, como altavoces, cerca del monitor, o si cambia la orientación de éste, el color puede perder uniformidad.

■ El blanco no parece blanco

- Ajuste la temperatura del color.

■ Los botones del monitor no funcionan (aparece en pantalla)

- Si el bloqueo de los controles está ajustado en SI, ajústelo en NO.

■ Las letras y líneas muestran sombras rojas o azules en los bordes

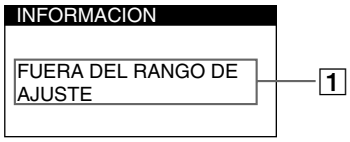
- Ajuste la convergencia.

■ Se oye un zumbido inmediatamente después de activar la alimentación

- Este es el sonido del ciclo de desmagnetización automática. Al activar la alimentación, el monitor se desmagnetiza automáticamente durante cinco segundos.

* Si es necesario aplicar un segundo ciclo de desmagnetización, deje que transcurra un intervalo mínimo de 20 minutos para obtener resultados óptimos. Es posible que se oiga un zumbido, pero esto no es falla de funcionamiento.

Mensajes en pantalla



1 Si aparece “FUERA DEL RANGO DE AJUSTE”:

Indica que la señal de entrada no cumple las especificaciones del monitor. Consulte las soluciones siguientes.

- Compruebe que el rango de frecuencias de vídeo se encuentra dentro del especificado para el monitor. Si ha sustituido un monitor antiguo por este, vuelva a conectar el antiguo y ajuste el rango de frecuencias en los siguientes valores:

  PARA A240
  Horizontal: 30 – 70 kHz; Vertical: 48 – 120 Hz

  PARA A440
  Horizontal: 30 – 96 kHz; Vertical: 48 – 170 Hz

1 Si aparece “SIN SEÑAL DE ENTRADA”:

Indica que no se recibe ninguna señal de entrada. Consulte las soluciones siguientes.

- Compruebe que el cable de señal de vídeo está correctamente conectado y que todos los enchufes están perfectamente insertados en sus receptáculos.
- Compruebe que los pines del conector de entrada de vídeo HD15 no están doblados ni aplastados.
- Compruebe que la alimentación de la computadora está activada.
- Compruebe que la tarjeta gráfica se encuentra completamente insertada en la ranura bus adecuada.

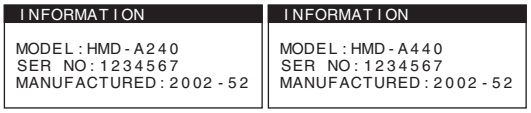
1 Si aparece “MONITOR EN MODO AHORRO ENERGIA”:

Indica que la computadora se encuentra en el modo de ahorro de energía. Este mensaje sólo aparece cuando la computadora se encuentra en el modo de ahorro de energía y se oprima cualquiera de los botones del monitor. Consulte las soluciones siguientes.

- Oprima cualquier tecla del teclado de la computadora o mueva el ratón.
- Compruebe que la alimentación de la computadora está activada.
- Compruebe que la tarjeta gráfica se encuentra completamente insertada en la ranura bus adecuada.

Para ver el nombre, número de serie y fecha de fabricación de este monitor.

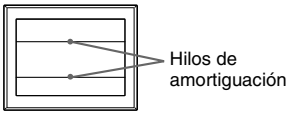
Cuando el monitor reciba una señal de vídeo, mantenga oprimido el botón de control durante un mínimo de cinco segundos para que aparezca el cuadro de información de este monitor.



ES

Si aparecen líneas finas en pantalla
(hilos de amortiguación)

Estas líneas no indican falla de funcionamiento; son un efecto normal del tubo de imagen Trinitron con este monitor. Se trata de sombras de los hilos de amortiguación utilizados para estabilizar la rejilla de apertura. La rejilla de apertura es el elemento esencial que hace que el tubo de imagen Trinitron sea único al permitir que llegue más luz a la pantalla, obteniéndose imágenes con mayor brillo y detalle.



Función de autodiagnóstico

Este monitor dispone de una función de autodiagnóstico. Si existe un problema con su monitor o con su computadora, la pantalla se quedará sin imagen y el indicador ⏻ (alimentación) se iluminará en verde o parpadeará en naranja. Si el indicador ⏻ (alimentación) se ilumina en naranja, significa que la computadora está en el modo de ahorro de energía. Oprima cualquier tecla del teclado o mueva el ratón.

■ Si el indicador ⏻ (alimentación) se ilumina en verde

1 Desconecte el cable de entrada de vídeo o apague la computadora conectado.

2 Oprima el botón ⏻ (alimentación) dos veces para apagar el monitor y volver a encenderlo.

3 Mueva el botón de control ➡ durante 2 segundos.

Si aparecen cuatro barras de color (blanco, rojo, verde, azul), significa que el monitor funciona correctamente. Vuelva a conectar los cables de entrada de vídeo. Ajuste el brillo y el contraste y pruebe el monitor. Si el problema persiste, examine la computadora.
Si las barras de color no aparecen, significa que existe una posibilidad de falla del monitor. Informe a un proveedor Sony autorizado sobre el estado del monitor.

■ Si el indicador ⏻ (alimentación) parpadea en naranja

Apague (OFF) el monitor y vuelva a encenderlo (ON).

Si el indicador ⏻ (alimentación) se ilumina en verde, significa que el monitor funciona correctamente.
Si el indicador ⏻ (alimentación) aún parpadea, significa que existe una posibilidad de falla del monitor. Cuente el número de segundos entre los parpadeos en naranja del indicador ⏻ (alimentación) e informe a un proveedor Sony autorizado sobre el estado del monitor. Asegúrese de anotar el nombre del modelo y el número de serie del monitor. Tome nota también del fabricante y modelo de la computadora y de la tarjeta gráfica.

Especificaciones

HMD-A240

TRC	Paso de la rejilla de apertura de 0,24 mm (centro) 17 pulgadas, medido en diagonal 90 grados de deflexión FD Trinitron
Tamaño de imagen visible	Aprox. 327 × 243 mm (an/al) (12 7/8 × 9 5/8 pulgadas)
Imagen visible	Aprox. 406 mm (16 pulgadas)
Resolución	
Máxima	Horizontal: 1280 puntos Vertical: 1024 líneas
Recomendada	Horizontal: 1024 puntos Vertical: 768 líneas
Área de imagen estándar	Aprox. 312 × 234 mm (an/al) (12 3/8 × 9 1/4 pulgadas)
Frecuencia de deflexión	Horizontal: 30 a 70 kHz Vertical: 48 a 120 Hz
Corriente/tensión de entrada de ca	100 - 120 V, 50 - 60 Hz, Máx. 1,7 A
Consumo de energía	Aprox. 100 W
Temperatura de funcionamiento	10 ºC a 40 ºC
Dimensiones	Aprox. 422 × 432 × 426 mm (an/al/prf) (16 5/8 × 17 1/8 × 16 1/2 pulgadas)
Peso	Aprox. 18 kg (39,1 lb)
Plug and Play	DDC2B/DDC2Bi GTF
Accesorios suministrados	Cable de alimentación (1) Tarjeta de garantía (1) Este manual de instrucciones

HMD-A440

TRC	Paso de la rejilla de apertura de 0,24 mm (centro) 19 pulgadas, medido en diagonal 90 grados de deflexión FD Trinitron
Tamaño de imagen visible	Aprox. 365 × 274 mm (an/al) (14 3/8 × 10 7/8 pulgadas)
Imagen visible	Aprox. 456 mm (18 pulgadas)
Resolución	
Máxima	Horizontal: 1920 puntos Vertical: 1440 líneas
Recomendada	Horizontal: 1280 puntos Vertical: 1024 líneas
Área de imagen estándar	Aprox. 352 × 264 mm (an/al) (13 7/8 × 10 3/8 pulgadas)
Frecuencia de deflexión	Horizontal: 30 a 96 kHz Vertical: 48 a 170 Hz
Corriente/tensión de entrada de ca	100 - 120 V, 50 - 60 Hz, Máx. 2,0A
Consumo de energía	Aprox. 130 W
Temperatura de funcionamiento	10 ºC a 40 ºC
Dimensiones	Aprox. 461 × 479 × 471 mm (an/al/prf) (18 1/8 × 19 1/8 × 18 1/2 pulgadas)
Peso	Aprox. 26 kg (57 lb)
Plug and Play	DDC2B/DDC2Bi GTF
Accesorios suministrados	Cable de alimentación (1) Tarjeta de garantía (1) Este manual de instrucciones

* Condición de sincronización horizontal y vertical recomendada
- La anchura de sincronización horizontal debe ser superior a 1,0 µseg.
- La anchura de supresión horizontal debe ser superior a 3,0 µseg.
- La anchura de supresión vertical debe ser superior a 500 µseg.

El diseño y las especificaciones están sujetos a cambios sin previo aviso.

Appendix

Preset mode timing table (For HMD-A240)

No.	Resolution (dots × lines)	Horizontal Frequency	Vertical Frequency	Graphics Mode
1	640 × 480	31.5 kHz	60 Hz	VGA-G
2	720 × 400	31.5 kHz	70 Hz	VGA-Text
3	800 × 600	37.9 kHz	75 Hz	VESA
4	800 × 600	53.7 kHz	85 Hz	VESA
5	832 × 624	49.7 kHz	75 Hz	Macintosh 16" Color
6	1024 × 768	60.0 kHz	75 Hz	VESA
7	1024 × 768	68.7 kHz	85 Hz	VESA
8	1280 × 1024	64.0 kHz	60 Hz	VESA

Preset mode timing table (For HMD-A440)

No.	Resolution (dots × lines)	Horizontal Frequency	Vertical Frequency	Graphics Mode
1	640 × 480	31.5 kHz	60 Hz	VGA-G
2	640 × 480	43.3 kHz	85 Hz	VESA
3	720 × 400	31.5 kHz	70 Hz	VGA-Text
4	800 × 600	53.7 kHz	85 Hz	VESA
5	832 × 624	49.7 kHz	75 Hz	Macintosh 16" Color
6	1152 × 870	68.7 kHz	75 Hz	Macintosh 21" Color
7	1024 × 768	68.7 kHz	85 Hz	VESA
8	1280 × 1024	91.1 kHz	85 Hz	VESA
9	1600 × 1200	93.8 kHz	75 Hz	VESA

If the input signal does not match one of the factory preset modes above, the Generalized Timing Formula feature of this monitor will automatically provide an optimal image for the screen as long as the signal is GTF compliant.

PRINTING THE SERVICE MANUAL

The PDF of this service manual is not designed to be printed from cover to cover. The pages vary in size, and must therefore be printed in sections based on page dimensions.

NON-SCHEMATIC PAGES

Data that does NOT INCLUDE schematic diagrams are formatted to 8.5 x 11 inches and can be printed on standard letter-size and/or A4-sized paper.

SCHEMATIC DIAGRAMS

The schematic diagram pages are provided in two ways, full size and tiled. The full-sized schematic diagrams are formatted on paper sizes between 8.5" x 11" and 18" x 30" depending upon each individual diagram size. Those diagrams that are LARGER than 11" x 17" in full-size mode have been tiled for your convience and can be printed on standard 11" x 17" (tabloid-size) paper, and reassembled.

TO PRINT FULL SIZE SCHEMATIC DIAGRAMS

If you have access to a large paper plotter or printer capable of outputting the full-sized diagrams, output as follows:

1) Note the page size(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.

2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your large format printer. Confirm that the printer settings are set to output the indicated page size or larger.

3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT TILED VERSION OF SCHEMATICS

Schematic pages that are larger than 11" x 17" full-size are provided in a 11" x 17" printable tiled format near the end of the document. These can be printed to tabloid-sized paper and assembled to full-size for easy viewing.

If you have access to a printer capable of outputting the tabloid size (11" x 17") paper, then output the tiled version of the diagram as follows:

1) Note the page number(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.

2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your printer. Confirm that the plotter settings are set to output 11" x 17", or tabloid size paper in landscape (▭) mode.

3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT SPECIFIC SECTIONS OF A SCHEMATIC

To print just a particular section of a PDF, rather than a full page, access the Graphics Select tool in the Acrobat Reader tool bar.

1) To view the Graphics Select Tool, press and HOLD the mouse button over the Text Select Tool which looks like:
This tool will expand to reveal to additional tools.
Choose the Graphics Select tool by placing the cursor over the button on of the far right that looks like:

2) After selecting the Graphics Select Tool, place your cursor in the document window and the cursor will change to a plus (+) symbol. Click and drag the cursor over the area you want to print. When you release the mouse button, a marquee (or dotted lined box) will be displayed outlining the area you selected.

3) With the marquee in place, go to the file menu and select the "Print..." option. When the print window appears, choose the option under the section called "Print Range" which says "Selected Graphic".

Select OK and the output will print only the area that you outlined with the marquee.

(continued >)

ON-SCREEN SEARCH OPTION

All of the text within the service manual PDF is content searchable. This means that you can enter any text, word, phrase or reference number that appears in the manual, and the PDF software will search, find and move the cursor to the location where you requested text first appears. This feature can be particularly useful in locating components on a specific schematic or printed wire circuit board (PWB) diagrams.

Follow these steps to effectively locate a component on a schematic diagram:

1) Locate the schematic you want to search by clicking on the corresponding bookmark on the left side of the screen. The view on the right of the screen will then jump to the desired schematic page.

2) Magnify the diagram to at least 400% before conducting a component search. This will enable you to easily view the reference number when it is highlighted on screen. To do this, click on the magnifying glass button on the tool bar at the top of the screen. Move the cursor over the diagram and RIGHT click you mouse. Select the 400% magnification option on the pop-up menu. Click on the button with the icon of the open hand to deactivate the magnification tool

3) Search the diagram (or the entire manual) by clicking on the binocular button tool at the top of the screen. The “Find” window will appear and allow you to type in your desired text. Type in a reference designator, such as R502, and click on the “Find” button. If the component is not on the diagram, but is listed anywhere else in the manual, the cursor will jump to the first location the text is found in the file. To find another instance of that same text, click on the binocular button again and select “Find Again.”